

NINETEENTH ANNUAL REPORT

ON THE
CONDITION OF THE COMBINED
SANITARY DISTRICT

OF

WEST SUSSEX,

FOR THE YEAR 1892,

BY

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HORSHAM:

WEST SUSSEX TIMES & SUSSEX STANDARD, MARKET SQUARE.

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1893.

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INDEX.

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STEYNING DISTRICT 1-26

| | |
|-------------------------------|-------|
| Population | 1 |
| Births and birth-rate | 2 |
| General mortality | 3 |
| Infant mortality | 4 |
| Zymotic mortality | 5 |
| Hangleton Hospital | 7 |
| Water supply | 9 |
| Drainage and sewage | 10 |
| Steyning drainage | 10 |
| New Shoreham Harbour | 15 |
| Scavenging and cleansing..... | 16 |
| Systematic inspection | 16 |
| Cowsheds and Dairies | 17 |
| Miscellaneous | 18 |
| Inquests | 18 |
| Statistical tables..... | 19-26 |

HORSHAM DISTRICT (Rural) ... 27-44

| | |
|------------------------------|-------|
| Population | 27 |
| Births and birth-rate | 27 |
| General mortality | 28 |
| Infant mortality | 30 |
| Zymotic mortality | 30 |
| Water Supply | 32 |
| Drainage and sewage | 33 |
| Scavenging and cleansing ... | 33 |
| Ifield and Crawley drainage | 33 |
| Systematic inspection | 35 |
| Miscellaneous | 36 |
| Inquests | 36 |
| Statistical tables..... | 37-44 |

PETWORTH DISTRICT 45-62

| | |
|-------------------------------|-------|
| Population | 45 |
| Births and birth-rate | 45 |
| General mortality | 46 |
| Infant mortality | 47 |
| Zymotic mortality | 48 |
| Water supply | 50 |
| Drainage and sewage | 51 |
| Systematic inspection..... | 52 |
| Scavenging and cleansing..... | 52 |
| Miscellaneous | 53 |
| Rainfall | 54 |
| Inquests | 54 |
| Statistical tables..... | 55-62 |

THAKEHAM DISTRICT 63-78

| | |
|-----------------------------|----|
| Population | 63 |
| Births and birth-rate | 63 |
| General mortality | 64 |

Thakeham (continued.)

| | |
|-------------------------------|-------|
| Infant mortality | 66 |
| Zymotic mortality | 67 |
| Water supply | 68 |
| Drainage and sewage | 68 |
| Scavenging and cleansing..... | 69 |
| Systematic inspection..... | 70 |
| Inquests | 70 |
| Miscellaneous | 71 |
| Statistical tables..... | 71-78 |

EAST PRESTON DISTRICT..... 79-94

| | |
|-------------------------------|-------|
| Population | 79 |
| Births and birth-rate | 80 |
| General mortality | 81 |
| Infant mortality | 82 |
| Zymotic mortality | 82 |
| Enteric fever at West Tarring | 85 |
| Systematic inspection..... | 86 |
| Scavenging and cleansing..... | 87 |
| Miscellaneous | 87 |
| Inquests | 87 |
| Statistical tables | 88-94 |

MIDHURST DISTRICT..... 95-114

| | |
|-----------------------------|---------|
| Population | 95 |
| Births and birth-rate..... | 96 |
| General mortality | 96 |
| Infant mortality | 98 |
| Zymotic mortality | 99 |
| Water supply | 101 |
| Drainage and sewage | 101 |
| Systematic inspection | 102 |
| Miscellaneous | 102 |
| Inquests | 102 |
| South Harting..... | 103 |
| Statistical tables | 107-114 |

WESTBOURNE DISTRICT..... 115-130

| | |
|-------------------------------|---------|
| Population | 115 |
| Birth and birth-rate | 116 |
| General mortality | 117 |
| Infant mortality | 118 |
| Zymotic mortality | 118 |
| Drainage and sewage | 120 |
| Water supply | 120 |
| Scavenging and cleansing..... | 121 |
| Systematic inspection..... | 122 |
| Miscellaneous | 122 |
| Inquests | 123 |
| Statistical tables | 124-130 |

INDEX (continued).

| | |
|------------------------------|---------|
| WORTHING DISTRICT | 131-158 |
| Population | 131 |
| Births and birth-rate | 133 |
| General mortality | 134 |
| Infant mortality | 136 |
| Zymotic mortality | 136 |
| Enteric fever | 138 |
| Public Elementary Schools .. | 143 |
| Water supply | 146 |
| Drainage and sewage | 146 |
| Systematic inspection | 146 |
| Miscellaneous | 150 |
| Inquests | 150 |
| Statistical tables | 151-158 |

LITTLEHAMPTON DISTRICT... 159-174

| | |
|----------------------------------|-----|
| Population | 159 |
| Births and birth-rate..... | 160 |
| General mortality | 161 |
| Infant mortality | 162 |
| Zymotic mortality | 163 |
| Death-rates at different periods | 164 |
| Water supply | 165 |
| Sewerage and drainage..... | 166 |
| Systematic inspection | 166 |
| Scavenging and cleansing..... | 166 |
| Bye-laws | 166 |
| Miscellaneous | 167 |
| Inquests | 167 |

Littlehampton (continued.)

| | |
|--------------------------|---------|
| Statistical tables | 168-174 |
|--------------------------|---------|

HORSHAM DISTRICT (Urban) 175-188

| | |
|-----------------------------|---------|
| Population | 175 |
| Births and birth-rate | 175 |
| Deaths and death-rate | 176 |
| Infant mortality | 176 |
| Zymotic mortality | 177 |
| Water supply | 178 |
| Drainage and sewage | 181 |
| Systematic inspection | 182 |
| Miscellaneous | 182 |
| Inquests | 183 |
| Statistical tables | 184-188 |

ARUNDEL DISTRICT..... 189-204

| | |
|-----------------------------|---------|
| Population | 189 |
| Births and birth-rate | 189 |
| General mortality | 190 |
| Infant mortality | 191 |
| Zymotic mortality | 192 |
| Water supply | 193 |
| Drainage and sewage | 194 |
| Miscellaneous | 196 |
| Inquests | 197 |
| Statistical tables | 198-204 |

GENERAL REPORT — 205-225.

| | |
|-----------------------------|-----|
| Population and area | 205 |
| Births and birth-rate | 207 |
| General mortality | 208 |
| Infant mortality | 212 |
| Zymotic mortality | 212 |

| | |
|-----------------------------|-----|
| Notification | 214 |
| Sale of food and drugs..... | 215 |
| Climate of Worthing | 216 |
| Temperature of soil | 217 |

| | |
|--|-----|
| TABLE I.—Showing the Births and Birth-rate in 1883-92..... | 218 |
|--|-----|

| | |
|---|-----|
| TABLE II.—Showing the Deaths and Death-rate from Zymotic Diseases in each of the ten years, 1881-90, and in 1891-92 | 219 |
|---|-----|

| | |
|---|-----|
| TABLE III.—Showing the Deaths in each month in the ten years 1881-90, and in 1891-92..... | 220 |
|---|-----|

| | |
|--|-----|
| TABLE IV.—Showing the Deaths and Death-rate from all causes and from various causes in the ten years 1881-90, and in 1891-92 | 221 |
|--|-----|

| | |
|---|--------|
| TABLE A.—Table of Deaths during the year 1892, in the combined Sanitary District of West Sussex, classified according to Diseases, Ages, and Localities | 222-23 |
|---|--------|

| | |
|--|--------|
| TABLE B.—Table of Population, Births, and of New Cases of Infectious Sickness, coming to the knowledge of the Medical Officer of Health during the year 1892, in the combined Sanitary District of West Sussex, classified according to Diseases, Ages, and Localities | 224-25 |
|--|--------|

RURAL SANITARY DISTRICT OF STEYNING.



| | |
|--------------------------------|--------------------|
| POPULATION IN 1871 | 14,060 |
| „ „ 1881 | 16,325 |
| „ „ 1891 | 19,030 |
| AREA IN ACRES | 45,969 |
| NUMBER OF HOUSES IN 1871 | 2,659 |
| „ „ 1881 | 3,080 |
| „ „ 1891 | not yet published. |

POPULATION.

The census returns of 1891 show that the parishes south of the Downs, forming the Shoreham sub-district, and lying between Brighton and New Shoreham had increased very much, especially at Aldrington where the figures are very striking.

During the ten years 1881-90 the natural increase of population by excess of births over deaths was 2,642 ; the actual increase in April last was shown to be 2,705.

In each Sub-district the changes in the population are thus shown :

| | 1871. | 1881. | 1891. |
|-----------------------------|-------|-------|-------|
| Shoreham sub-district | 8090 | 10229 | 12983 |
| Steyning sub-district | 5970 | 6096 | 6347 |
| Total | 14060 | 16325 | 19030 |

The population of each parish in each of the census years 1871, 1881, and 1891, was given in my last Annual Report, but the figures are subject to revision, as the full results of the last enumeration have not yet been published.

The population for the middle of 1892 is estimated at 19,340, an increase of 230 during the year; nearly all this increase is owing to the growth of Aldington; in the remaining parishes very slight changes have taken place.

BIRTHS AND BIRTH-RATE.

During the year 1892, the births of 527 children were registered; of these 268 were male, and 259 were female.

Estimating the population in the middle of the year at 19,340, the birth-rate was equal to 27·2 per 1,000 persons living.

The births and birth-rate in the district during the past ten years have been as follows:—

| Year. | Births. | Birth-rate. | Year. | Births. | Birth-rate. |
|----------|---------|-------------|----------|---------|-------------|
| 1883 ... | 528 ... | 31·0 | 1888 ... | 507 ... | 27·2 |
| 1884 ... | 519 ... | 29·0 | 1889 ... | 500 ... | 26·7 |
| 1885 ... | 524 ... | 28·8 | 1890 ... | 484 ... | 25·7 |
| 1886 ... | 513 ... | 28·0 | 1891 ... | 561 ... | 29·4 |
| 1887 ... | 470 ... | 25·5 | 1892 ... | 527 ... | 27·2 |

The mean number of births is 523, and the mean birth-rate is 27·8 per 1,000 of population.

In England and Wales the birth-rate during the year was 30·5 per 1,000 persons living, a rate 1·7 per 1,000 below the mean rate in the ten years, 1882—91.

The births and birth-rate in each locality during the past two years were as follows:—

| | Births. | | | Birth-rate. | |
|---------------------------|---------|-------|-----|-------------|-------|
| | 1891. | 1892. | | 1891. | 1892. |
| Portslade Parish..... | 157 | 155 | ... | 36·8 | 36·2 |
| Aldington Parish | 78 | 64 | ... | 35·0 | 26·1 |
| Southwick Parish | 88 | 81 | ... | 34·4 | 31·6 |
| Rest of Shoreham S.D. ... | 91 | 85 | ... | 22·8 | 21·2 |
| Steyning Parish | 37 | 39 | ... | 21·7 | 22·8 |
| Henfield Parish | 47 | 39 | ... | 23·4 | 19·4 |
| Rest of Steyning S.D..... | 63 | 64 | ... | 26·9 | 27·5 |
| Total..... | 561 | 527 | | 29·4 | 27·2 |

GENERAL MORTALITY.

There were 299 deaths registered in this district in the year 1892, but to this number must be added the deaths of 18 persons in New Shoreham Workhouse, and of 1 person in the Worthing Infirmary, which public institutions are outside the district. From this total of 318 must be deducted one death in Hangleton Hospital, which occurred amongst persons not belonging to the district, leaving the corrected figures at 317.

The 18 Workhouse deaths have been distributed among the several parishes whence each inmate came, viz.:

Hangleton, 1; Portslade, 3; Southwick, 2; Kingston, 1; Lancing, 1; Old Shoreham, 2; Sompting, 1; Coombes, 1; Steyning, 3; Edburton, 1, Henfield, 2; in all 18.

Estimating the population in the middle of the year at 19,340, the death-rate was equal to 16·4 per 1,000 persons living, a rate higher than in any year since 1883 when it was also 16·4.

In country places throughout England and Wales the mortality in 1892 was equal to 18·1 per 1,000 of population.

There is a considerable difference in the death-rate of the two sub-districts, which is chiefly due to age and sex distribution and to occupation. In the smaller agricultural area to the north, the deaths are the lowest, as the following figures show :—

Shoreham Sub-district :—

| | Deaths. | | | Death-rate. | |
|---------------------------|---------|-------|-----|-------------|-------|
| | 1891. | 1892. | | 1891. | 1892. |
| Portslade Parish..... | 73 | 94 | ... | 17·1 | 22·0 |
| Aldrington Parish | 49 | 34 | ... | 22·0 | 13·9 |
| Southwick Parish | 30 | 50 | ... | 11·7 | 19·5 |
| Rest of sub-district..... | 64 | 49 | ... | 16·0 | 12·2 |

Steyning sub-district :—

| | | | | | |
|---------------------------|-----|-----|-----|------|------|
| Steyning Parish | 27 | 26 | ... | 15·8 | 15·2 |
| Henfield Parish | 26 | 24 | ... | 13·0 | 11·9 |
| Rest of sub-district..... | 36 | 40 | ... | 15·4 | 17·2 |
| Total..... | 305 | 317 | | 16·0 | 16·4 |

The variations in the death-rate during the past 10 years have been as follows :—

| Year, | Deaths. | Death-rate, | Year. | Deaths. | Death-rate. |
|-------|---------|-------------|-------|---------|-------------|
| 1883 | ... 279 | ... 16·4 | 1888 | ... 242 | ... 13·0 |
| 1884 | ... 263 | ... 14·7 | 1889 | ... 213 | ... 11·4 |
| 1885 | ... 260 | ... 14·3 | 1890 | ... 281 | ... 14·9 |
| 1886 | ... 291 | ... 15·9 | 1891 | ... 305 | ... 16·0 |
| 1887 | ... 252 | ... 13·7 | 1892 | ... 317 | ... 16·4 |

The mean number of deaths was 270 and the mean death-rate was 14·5 per 1,000 of population. During the same period there were 5,233 births, so that the natural increase of population by excess of births over deaths was 2,530; the actual increase as shown by the census returns was 2,705, so that several persons must have migrated into this district.

In each parish the deaths were thus distributed :—

| | | | | |
|----------------------|------|-----|--------------------|------|
| West Preston..... | none | ... | Coombes | 1 |
| Patcham..... | 14 | ... | Botolphs | none |
| West Blatchington... | none | ... | Bramber | 3 |
| Hangleton | 1 | ... | Steyning | 26 |
| Portslade | 94 | ... | Upper Beeding..... | 10 |
| Aldrington | 34 | ... | Edburton | 6 |
| Southwick | 50 | ... | Poynings | 6 |
| Kingston | 9 | ... | Woodmancote | 4 |
| Lancing | 13 | ... | Henfield | 24 |
| Old Shoreham | 3 | ... | Ashurst | 3 |
| Sompting | 8 | ... | Shermanbury..... | 8 |
| Total | | ... | 317. | |

INFANT MORTALITY.

The *infant mortality* is here given as measured by the number of deaths under one year of age to the total number of births in the year :—

| | Births | Deaths under one year | Ratio to 1000 Births |
|-------------------------------------|--------|--------------------------|-------------------------|
| Portslade Parish..... | 155 | 32 | 142 |
| Aldrington Parish | 64 | 3 | 47 |
| Southwick Parish | 81 | 15 | 185 |
| Rest of Shoreham sub-district | 85 | 4 | 47 |
| Steyning Parish | 39 | 4 | 102 |
| Henfield Parish | 39 | 4 | 102 |
| Rest of Steyning sub-district..... | 64 | 7 | 108 |
| Total..... | 527 | 69 | 131 |

The 69 *infantile* deaths included 1 from measles, 11 from whooping-cough, 5 from diarrhoea, 3 from tabes mesenterica, 1 from tuberculosis, 1 from convulsions, 15 from lung diseases, 1 from enteritis, 8 from debility, 5 from marasmus, 1 from syphilis, 1 from malformation, 1 from an accident, and 1 from influenza; 14 infants were born prematurely.

The ratio of infant mortality was somewhat higher than usual. In England and Wales the proportion of deaths under one year of age to registered births was 148 per 1,000 during the past year, the mean proportion in the preceding ten years having been 144.

ZYMOTIC MORTALITY.

The deaths from zymotic diseases were 10 in the case of those which are notifiable, and 31 in the other class where the number of cases cannot be obtained.

| | Cases | Deaths |
|-----------------------|-----------------|--------|
| Small-pox | none | none |
| Scarlatina | 40 | none |
| Diphtheria | 31 | 8 |
| Membranous Croup..... | 1 | none |
| Fever { | Typhus | none |
| | Enteric | 1 |
| | Continued..... | none |
| | Relapsing | none |
| | Puerperal | none |
| | Cholera..... | none |
| | Erysipelas..... | 1 |
| Total | 105 | 10 |

The Notification Act of 1889 came into operation on May 1st, 1891.

In the other class the deaths were as follows :—

| | |
|-------------------------------|----|
| Measles | 3 |
| Whooping Cough | 21 |
| Diarrhoea and Dysentery | 6 |
| Rheumatic Fever | 1 |
| | — |
| Total | 31 |

Adding the two classes together, there is a total of 41 deaths with a zymotic mortality of 2·07 per 1,000.

The prevalence in each quarter of each notifiable disease is shown in the following table :—

| | 1st Qr. | | 2nd Qr. | | 3rd Qr. | | 4th. Qr. | | Year | | Total |
|-------------------------|---------|------|---------|------|---------|------|----------|------|-------|------|-------|
| | under | over | under | over | under | over | under | over | under | over | |
| | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| Scarlatina | ... | ... | ... | 4 | 3 | 9 | 3 | 21 | 6 | 34 | 40 |
| Diphtheria | 1 | 2 | 3 | 7 | ... | 6 | 3 | 9 | 7 | 24 | 31 |
| Membranous Croup | ... | ... | ... | ... | 1 | ... | ... | ... | 1 | ... | 1 |
| Enteric Fever | ... | 1 | ... | 8 | ... | 10 | ... | 1 | ... | 20 | 20 |
| Puerperal Fever | ... | ... | ... | ... | ... | ... | ... | 1 | ... | 1 | 1 |
| Erysipelas | ... | 2 | ... | 1 | ... | 1 | ... | 8 | ... | 12 | 12 |
| | — | — | — | — | — | — | — | — | — | — | — |
| Total... | 1 | 5 | 3 | 20 | 4 | 26 | 6 | 39 | 14 | 91 | 105 |

SCARLATINA was most prevalent in the third and fourth quarters of the year, but most of the cases were very mild, and there was no death from this cause. In Portslade there were 22 cases, and the remaining 18 cases were scattered amongst various parts of the district. Most of the cases were of a very mild type, and this fact often accounts for the spread of the disease, as undetected cases attend school or run about the streets and infect other children. This fever appeared in 30 houses, and in 24 instances only one inmate was attacked, although others were in these houses who had not been protected by any previous attack. In three houses, three inmates were ill one after another, and in three houses two inmates had the disorder. In each case isolation was resorted to as far as possible, school attendance was stopped, and the rooms were disinfected and cleansed when the patient recovered.

DIPHTHERIA appeared chiefly in Portslade and Southwick, where there was an unusual prevalence. It existed all through the year, but chiefly in the second and fourth quarters. Many cases were mild and a few were imported, but the sanitary condition of Portslade and Southwick is very favourable to the spread, if not to the production of this disorder. The inmates of the houses along the harbour bank at Southwick seemed to be

more attacked than others, and here the drainage is very defective as so many house drains have their outfall on the foreshore in front of the dwellings, and at low-tide there is much nuisance from this cause. An inspection of Shoreham Harbour is reported below.

ENTERIC FEVER only caused one death. This was the case of a domestic servant, 23 years of age, who was taken ill in London and sent home to her parents at Ashurst, where she died a few days after her return. She was very exhausted on her arrival. The remaining cases, none of which proved fatal, occurred at Portslade (9), Southwick (3), Steyning (5), and in other parishes 2. In no instance was there any spread in the disease, although the conditions for isolation in some of the cottages were very defective.

Each notified case was visited, and the usual instructions were given and precautions taken. In nearly every instance the house, or part of the house, was disinfected by the Inspector, as it is the only way to ensure that the work is properly done.

INFLUENZA was again very prevalent in the first quarter of the year, and it was the cause of 23 deaths against 7 in the corresponding period of 1890. In Steyning there were 8, and in Portslade there were 6 deaths from this cause. There was also a considerable increase in the number of deaths from lung diseases, so that the mortality was higher than in any previous quarter, there being altogether 141 deaths in 1892, against 81 and 85 in the two preceding years. This great increase was very marked all over the country, so that for the first time in the history of registration the death-rate in country places exceeded that of the urban districts. As usual, more adults than young persons died from influenza; 5 were under 25, and 18 were over 25 years of age.

THE HOVE INFECTIOUS HOSPITAL AT HANGLETON.

The following Report respecting the application of the Authority to the Hove Commissioners to be allowed to send cases from their district to the Hangleton Hospital, was sent by me in March last :—

The parishes which are most likely to send cases to this hospital, if such an arrangement can be arrived at, are Aldrington with a population of 2,206, Portslade with a population of

4,236, and Southwick with a population of 2,558, total 9,000. The other parishes are too distant to render it advisable to move a patient, and in these places isolation can be generally carried out without removal. It is difficult to say what number of cases would occur in a year as the Notification Act has only been in force since May, 1891. In the eight months ending December 31st, 1891, only 35 cases were reported in the whole of the district, and of these about 6 might have been sent to the hospital. This year up to the present time (March 21st) only seven cases have been notified, and none of these would have required removal. The numbers are too small at present to afford any correct data, and there has been no epidemic prevalence of infectious disease during the past few months. Isolation in a hospital would be most valuable if a case of small-pox broke out in such populous places as the above parishes. In the case of scarlatina, an early case might be removed; and in enteric fever and diphtheria isolation would be of much value. These are the four diseases which are most likely to be met with. The whole population of your district is 19,030 at the census of 1891, and it may be taken at 19,200 by the middle of this year. Half of this number could not receive the benefit of this hospital, while the remaining half is an increasing one, and especially at Aldrington, which is adjacent to Hove. In fact on three or four occasions last year patients were taken from their homes at Aldrington and removed to the Infectious Hospital solely on the action of the Hove Sanitary Authority. I think if provision were made to receive an average of twelve patients a year in the Sanatorium, such a number would suffice for the wants of the population. Assuming that each patient remained two months in the wards, then six patients would occupy one bed all the year round, and two beds, reserved for your sanitary district, would accommodate twelve persons a year.

As a result of prolonged negotiation, the following conditions in relation to the use of Hangleton Hospital were recommended for acceptance by the Hove Commissioners :—

The Steyning Rural Sanitary Authority to have the use of two beds, and the Shoreham Local Board to have the use of one bed.

The same to be paid for as follows : A fixed charge of £15 per annum to be paid for each bed, and when any bed is occupied the cost of such occupied bed to be paid in addition, namely, £5 5s. per week.

This arrangement to be for one year certain, and then to be further considered.

If further beds are required at any time by the Rural Sanitary Authority, or the Shoreham Local Board, an application for same to be made to the Commissioners, who may receive or refuse at their entire option, but if received, the weekly charge to be £6 6s.

When 20 beds are occupied in the Hospital the above arrangements shall cease for the time.

The agreement was adopted, and the arrangement came into force last August.

Up to the present time the Hangleton Hospital has 26 beds, each ward block containing 12 beds, and an isolation block with 2 beds.

The administration block, mortuary, laundry, and outhouses are constructed to meet the wants of 7 hospital ward blocks of 12 beds each, two of which ward blocks only have been erected.

The cost of Land, Buildings, and Furnishing amounted to £12,070, and as there are 26 beds, the first cost of each bed comes to £464 4s. 7d.

The interest on the above capital sum is £439 1s. and the annual establishment expenses, after deducting annual receipts, amount to £617 11s. 5d.; adding these two sums together the nett total annual cost of the Hospital comes to £1,056 12s. 5d.; these figures are based on the average of the past five years. The Town Clerk of Hove estimates that the standing annual cost of each bed is—unoccupied, £33 19s. 2d.; occupied, £65 4s. 4d. The average cost per head of each patient admitted is put down at £30 3s. 9d. or £5 7s. 11d. a week, the average stay of each patient being 39 days.

WATER SUPPLY.

The water supply is in precisely the same condition as described in my last annual report, so that it need not be repeated here.

There were 17 samples of water sent for analysis from wells or dipping holes in the country districts. Six of these were found to be polluted, not always from defective drainage, but from neglected kerbs or dirty dipping holes, whereby dirty surface water could enter. There is not enough care taken to keep all drinking water as clear as possible by looking after their wells and tanks and keeping them in proper order. There is often to be found a want of self-reliance in the tenant who leaves his storage tank in a dirty condition, and who will send a bottle of water to be analysed rather than take the trouble to cleanse his tank at once.

DRAINAGE AND SEWAGE.

The description given last year holds true now. Portslade and Southwick remain in the same insanitary condition to which I have often called attention before. The Authority has discussed the question frequently, and at the close of the year a parochial committee was formed in each of these parishes to consider a scheme of drainage. The matter is an urgent one, and I think that Portslade will soon bring forward a scheme, but the opposition at Southwick is very considerable. If these two parishes had not an excellent water supply the danger to health would be very great indeed. Nothing can be done to make the sanitary surroundings of the houses better, except by providing a good system of sewage removal, by emptying and filling up with clean material the present cesspools, by ventilating the drains and sewers, by abolishing all bell-traps, and by providing flushing cisterns to cleanse the closet and house drains. At present everything is in a most unsatisfactory state.

At Steyning the drainage is defective through a want of proper fall in some of the drains, and to a want of any water supply to flush them properly. A more detailed condition of Steyning is given below.

(1.) I visited Steyning on August 24th to inspect a stream which flows past some works used by Messrs. G. F. Breach and Sons, as wool staplers. Complaints were made that the stream was rendered offensive by reason of various products flowing into it from the factory. When the town was drained in 1877 some drains were put in at these works and connected with the main sewer, and these drains exist at the present time. Yet there was clear evidence to the naked eye that the water was much polluted in its course past the works, and chemical analysis showed a large amount of organic matter in the water taken just below the works as compared with that taken above them.

There were several opening from the works into this stream ; some were for rain or surface water, some were not used, and in three or four cases chalk or lime water flowed directly into the stream. The chief nuisance arose from the washing of the dirty skins after they had been received from the butchers. The water flows by a pipe from the stream into several pits where the skins were washed and cleansed ; the dirty water then flows into a drain, and thence into the sewer, but there was also a hole in the outer wall whence some of this dirty water flowed directly back again into the stream.

A second source of nuisance arose from the storage of dogs' manure in vessels, whence it is ladled when required and used for converting the prepared skin into leather.

These vessels stand in the open air and they are covered over with sacking. The effluvia at this spot are very offensive. I went over the works with Mr. Powell Breach who showed me the whole process. He at once consented to carry out certain works so as to prevent pollution of the stream, and these are now completed. When I visited the place to-day I found the stream much less offensive ; most of the holes were blocked up and the drainage of any refuse fluid passes away now into the sewer. At only one spot did any chalky water pass into the stream. The hole in the wall, where the skins are washed, has been built up, so that it is now only of use as a "safety" opening in case of floods.

There is still much dirty mud in the bottom of the stream ; this should be removed as soon as cooler weather sets in.

The nuisance caused by the dog manure remains as before. This could be abated by storing it in covered and closed vessels whence it could be pumped out by a pump placed inside the building, instead of being baled out as at present.

I noticed also at my last visit that the premises were in a cleaner condition than before, and that much refuse of all kinds was not allowed to accumulate.

The trade is an offensive one, and constant care must be exercised in carrying it out, so as to diminish the nuisances that may exist.

(2.) There is an old pigstye at a house occupied by Mr. Goatcher, which is quite unfit for use ; the floor is uneven and filthy, and it drains directly into the stream just above Messrs. Breach's Works. There is also a heap of manure which drains into the stream, and this should be at once removed.

(3.) There is a nuisance at the D'Oyly Joinery Works near the Station at Steyning. The works are in the parish of Upper Beeding, and about 90 boys and men are employed. There is one closet on the ground floor which drains into a ditch by the side of a road. This is made worse by steam and hot water passing down the same pipe, so that filthy offensive fluid can be seen along the road side for a long distance. This closet is now blocked up, but an examination should be made of the drainage in other parts of the building, to see that nothing of an injurious nature can pass along the road. Means should also be taken to prevent the steam issuing forth at its present level. The ditch should be cleaned out.

(4.) Complaints have also been made of the condition of the sewage outfall, of the foul condition of the ditches in the low-lying brooklands, and of the manholes and main drains in the town.

There have been two cases of typhoid fever in houses near a man-hole, and I consider these house drains should be opened and examined, so as to see if any defects exist. I am not at all satisfied with the present system of flushing the drains, and I think that some more effectual means should be devised.

A further report, dated September 19th, stated that a system of drainage was carried out for Steyning in 1877 at a cost of £1,550. It dealt with the greater portion of the sewage, but it did not deal entirely with that portion which flows down Jarvis sewer. The original idea was that the sewage should be limited in quantity by keeping out storm or surface water, and that it should be delivered on to some land to the north-east of the town, where it could be used for irrigation purposes. This is not done, and the drainage from the two sewers now runs into ditches, and finally the dirty water flows into the river Adur. There is a great nuisance caused by this pollution of the ditches, which are in a filthy condition and require to be cleansed. The main drain was to-day blocked near a lamp-hole, close to Mr. Gates's house, and a great nuisance was caused by the blocked up sewage flowing into a garden through an open joint. There was also a large amount of deposit in the drains just behind the block. This has now been removed, but it is clear that the flushing arrangements are not adequate for the purpose, and the more so as there is but a slight fall in the sewer near the outfall. Steyning has adopted the water carriage system for sewer purposes, but it has not provided the water. There is an ample supply of excellent water in and around Steyning from the springs which break forth at the foot of the Downs, and I am of opinion that waterworks should be established on a small scale, so that not only could the townspeople obtain water without pumping and free from any risk of pollution, but the whole drainage system could be properly flushed. In this way also the adjoining parishes of Upper Beeding and Bramber might, with great advantage, be supplied with good water. In the second place, the sewage should be utilised on the land, which at the outfall should be laid out for this special purpose. For a week, most of the daily flow of sewage has been flowing over this meadow in a rough manner, and it has all been absorbed by the ground, and none of it flows into the ditch which skirts the lower border of the meadow. This plan would do away with most of the nuisance arising from the filthy ditches which pollute the air of the low-lying brooklands. These

ditches should be cleaned out, and they should receive no more sewage. More attention should be paid to the weekly cleansing of the manholes, sewers, and outfall tank, so as to ensure a thorough removal of the fresh sewage day by day. The ventilating shafts should be opened to see if they are acting properly. A set of rods should be provided so as to cleanse the drains and sewers from manhole to manhole. There is also a ditch which runs through the town, and which is in a very dirty state, and it requires to be cleaned out the whole of its length from Pompey-terrace to Gatewycke.

In a third report, dated November 9th, it was stated that by the end of September four cases of enteric fever had been notified in the parish :—

1. Miss S., age 32, on July 28th.
2. Miss G., age 23, on August 22nd.
3. Miss Harriet G., age 24, on August 23rd.
4. Edward H., age 7, on September 20th.

Nos. 1, 3, and 4 recovered ; No. 2, died, but her death on September 1st, was registered as due to Diphtheria 4 weeks, complicated with Enteric Fever, 3 weeks. This death appears in the Registrar-General's Quarterly Return as one of diphtheria, and I have adopted the same classification. The remaining three cases all recovered. There was nothing in common to all these cases as regards water supply, drainage, or milk supply.

In each of the four houses in which these patients lived there were no sanitary defects to account for the illness. I am of opinion that the cause was due to the condition of the main system of drainage, on which I made a report on September 19th, and a copy of which should be sent to the Local Government Board.

The sewers have now been cleansed and flushed, the water-course has been cleansed, and all filth has been removed.

Further pollution of the stream has been stopped by the alterations carried out by Messrs. Breach and Son, who have now taken all precautions against fouling the stream from any products from their works.

The sewers are now clean, but the fall in some of them is very slight, and the present system of flushing is not sufficient.

The sewage has lately been applied in a rough manner over some grazing land, but a large quantity still flows into ditches which are in very offensive condition. There have been no fresh cases of fever since September 20th.

The chief points for the consideration of your Authority are:—

1. A sufficient water supply, whereby the drains and sewers may be effectually flushed.
2. The adoption of automatic flushing tanks and flushing discs so as to clear the drains and sewers daily.
3. The utilisation of the sewage on properly prepared land.
4. The cleansing of all foul ditches, into which sewage now flows.
5. The better ventilation of the sewers at a few points.

The Authority then called in Mr. Loader of Brighton, the surveyor, who sent in the following report in December:—

Pursuant to your instructions I have made a general survey of the system of main drainage in operation at Steyning. I have also particularly directed my attention to that portion lying between the manhole chamber near the “Rest” by the Churchyard and the Shooting Field as far as the “Tank.” I have further taken levels over the latter portion. And I now beg to report as follows on the position of the system as I find the same, and as further elucidated by the accompanying sections. Starting from the manhole chamber near the “Rest,” I find (1), the depth of the said manhole below roadway is 15ft.; (2) the fall or inclination of the pipe sewer from the manhole to the lane at bottom is 1 in 220; (3) the fall from the lane to a point across the garden beyond is 1 in $147\frac{1}{2}$; (4) the rise from the said point in garden to the edge of stream is 1 in 830, *falling the wrong way*; (5), the fall from edge of stream to manhole where pipe sewer is joined at right angles by the pipe sewer coming from the direction of the Bleaching Works is 1 in 865; (6) the fall from foregoing manhole to lamphole is 1 in 645; (7) from lamphole to “Tank” the fall is 1 in 765. The distance thus traversed is 1,347 feet, and if the foregoing falls are averaged it would give a uniform fall or inclination of about 1 in 800, which may be called almost without gradient sufficient, in the absence of rainfall, to induce velocity of any scouring capacity. The size of sewer pipes, iron and stoneware, is 12 inches, and I doubt if they have been laid on concrete sufficient to prevent subsidence in places. In my opinion, the principal seat of mischief lies in the sewer between

the garden and the edge of the stream where the sewer falls the wrong way and causes a deposit, thereby still further checking the already inadequate flow through the sewer. And the flow is again retarded where the other sewer joins this at right angles, instead of through an acute angled junction. The sewer at and near the outfall did not appear to be running more than half-full, even after a heavy rainfall, and I was informed this was its normal condition. I account for this by the fact that the rainfall is excluded from the sewers (except such as runs from roofs of houses), and by the two before-mentioned throttling processes, which operate as if a lead pipe were to be half flattened at some point in its course, causing the water, on the supply side of the said flattening, to over-gorge the pipe, while the outlet side would run only very moderately. These are the facts of the case.

The following report was made in conjunction with the M. O. H. of the Port Sanitary (C. M. Kempe, Esq.) on the sanitary condition of New Shoreham Harbour.

NEW SHOREHAM HARBOUR.

Complaint has been made of a nuisance arising from time to time from the shores of the Harbour causing noxious effluvia in the air. At the request of the New Shoreham Port and the Steyning Rural Sanitary Authorities, we have examined the banks of the River Adur, and we beg to submit the following report :—

(1.) The chief cause of nuisance arises from the deposit of seaweed on the banks, and especially in the bays, where it is not subject to the ordinary current of the river. The deposit has been going on for years, and there are now many acres of ground covered with sand, and decomposed seaweed. The older and deeper layers are black and harmless, the weed having been converted into a vegetable mould. The fresh layers are but thinly covered with sand and, in the first few weeks of decomposition, the gases given off are very offensive. The nuisance is greatest in hot weather, or when digging operations are going on, and it is, of course, noticed most when the wind is blowing towards the shore. It is also offensive when the docks are being cleaned out, an operation which has to be performed at intervals, owing to the silting up of the sand. These deposits are very marked on the south bank of the River Adur, from the West Pier to the Chemical Works ; also from the East Pier to the Lock at Southwick. There is a considerable amount of seaweed growing on the north bank of the River Adur, near Kingston, but there is no nuisance from this cause.

(2.) A second cause of nuisance arises from a number of drains entering the River Adur in its eastern arm, and conveying sewage from several houses at Southwick and Kingston. This is very marked at Little Dock and Penny Dock, between the Timber Wharves at Southwick ; also on the foreshore in front of a terrace of houses in Albion Street, Southwick. The outfall of these drains is so arranged that at low, or even at ordinary tides, the sewage passes into the docks, or on to the foreshore in a black and foul condition, and the bank on the north side of the river is much polluted from this cause. If these drains delivered their contents into the centre of the stream, so as to be washed away twice a day by the tide, the nuisance would be reduced. This, however, would be but a very partial remedy, and the condition of the banks of the river at the points above indicated is such as to require a more effectual treatment.

SYSTEMATIC INSPECTION.

The following statement gives a summary of the work done by the Sanitary Inspector during the past year :—

| | |
|--|------|
| No. of Houses, &c., inspected | 647 |
| No. of Nuisances reported | 357 |
| No. of Nuisances abated without formal notice | 300 |
| No. of Notices served | 24 |
| Houses reported unfit for human habitation ... | none |
| Houses closed by order | none |
| Houses cleansed and disinfected | 119 |
| Water certificates granted for new houses ... | none |
| Wells dug | 4 |
| Wells cleansed | 2 |
| Cases of overcrowding abated | 2 |
| No. of samples of water analysed | 17 |
| No. of samples of water found polluted... .. | 6 |
| Unwholesome food seized | none |
| Earth closets provided | none |
| Privies altered | 13 |

SCAVENGING AND CLEANSING.

The usual contracts were made for removing ashes and house refuse from the houses in Aldrington and Portslade, and a fresh contract was entered into for the Parish of Southwick. The Authority required the house refuse to be removed and the ashpits cleansed fortnightly, under the superintendence of the Inspector of Nuisances, and all refuse and ashes to be removed to a fit and proper place, to be provided by the contractor for its reception, north of the railway and 100 yards from any inhabited house or high road.

The work at Portslade was very badly carried out during the year, due chiefly to the want of any proper system of scavenging being adopted.

Most of the houses here have back yards in which there is a fixed ashpit, but to these yards there is no means of access except through the houses. The contractor's men have to pass through the kitchen two or three times to empty an ashpit, and this is much objected to by the inmates, especially in wet and stormy weather. The proper way would be for each occupier to put the refuse in a tub or box, and to place such moveable receptacle in front of his door at a certain time in each week for removal. The district should be parcelled out into areas, so that one could be dealt with each day, and the labour saved in collection would be enormous. The Authority agree with me in this plan, and the people seem willing to try it, but for the present there is much difficulty in getting it done.

COWSHEDS AND DAIRIES.

Regulations under the Contagious Diseases (Animals) Act, 1886, and the Dairies, Cowsheds, and Milk-shops Order of 1885 were adopted in the whole of this Rural Sanitary District on April 26th, 1887, and they came into force on June 1st, 1887.

There are 41 registered cowsheds and dairies, and in these there are kept about 858 cows, the number slightly varying from time to time. In a few cases butter only is made, and the skimmed or separated milk is either sold, given away, or used as food for pigs.

In a few cases, 30 or 40 cows are kept, and, as a rule, the larger the establishment, the better is the method of keeping the animals, and much care is taken in providing good water and good means of lighting, ventilation and drainage.

In small places, the cows are often kept in the open fields for the greater part of the year, and the cowshed is only used at night; in such cases the cowsheds require much less attention than in places where the animals are kept in covered buildings or sheds all the year round.

The sheds have been frequently inspected, and they have been well kept.

MARGARINE ACT.

There are 45 grocers in the district, but, except in the more populous places, very little Margarine is sold. There seems to be very little demand for it in small villages or hamlets. In places where it is sold the clauses of the Act have been complied with.

BAKEHOUSES.

There are 44 bakehouses in the district, and these have been duly inspected, and kept in a clean condition.

SLAUGHTERHOUSES.

There are 10 slaughterhouses in the four largest parishes, and none in the smaller places. These have been often inspected, and they have been kept in a clean condition.

COMMON LODGING HOUSES.

There is no common lodging house in this district.

PROCEEDINGS BEFORE THE MAGISTRATES.

No proceedings were taken before the Magistrates during the year.

INQUESTS.

INQUESTS were held in 21 cases :— Male, 12 years, accidentally shot ; male, 6 months, accidentally suffocated in bed ; female, 21 years, epilepsy ; male, 50 years, found drowned ; male, 2 days, pneumonia ; female, 73 years, heart disease ; male, 60 years, suicide ; male, 32 years, found drowned ; male, 21 years, found drowned ; male, 5 years, accidentally burnt ; male, 16 months, natural causes ; male, 61 years, natural causes ; male, 58 years, killed by a train ; female, 8 years, diphtheria ; male, 64 years, accidentally knocked down ; male, 43 years, suicide by hanging ; male, 12 days, pneumonia ; male, 30 years, congestion of the lungs ; female, 63 years, narcotic poisoning ; male, 50 years, rupture of an artery ; male, 28 years, drowned.

Two deaths were returned as “ not certified ” out of a total of 317 deaths :—Male, 72 years, bronchitis ; male, 2 days, premature birth.

STEYNING RURAL SANITARY DISTRICT.

TABLE 1.—Showing the Deaths at various groups of ages in the
ten years, 1883-92.

| Year. | At all Ages. | Under 1 Year. | 1 to 5. | 5 to 15. | 15 to 25. | 25 to 60. | 60 and over. |
|-------------|--------------|---------------|---------|----------|-----------|-----------|--------------|
| 1883..... | 279 | 58 | 33 | 21 | 21 | 66 | 80 |
| 1884..... | 263 | 58 | 36 | 20 | 9 | 61 | 79 |
| 1885..... | 260 | 57 | 34 | 8 | 12 | 55 | 94 |
| 1886..... | 291 | 62 | 47 | 13 | 11 | 66 | 92 |
| 1887..... | 252 | 45 | 17 | 17 | 16 | 64 | 93 |
| 1888..... | 242 | 45 | 21 | 8 | 10 | 66 | 92 |
| 1889..... | 213 | 33 | 21 | 7 | 10 | 52 | 90 |
| 1890..... | 281 | 51 | 32 | 17 | 14 | 57 | 110 |
| 1891..... | 305 | 63 | 34 | 11 | 7 | 71 | 119 |
| 1892.. | 317 | 69 | 40 | 12 | 13 | 64 | 119 |
| Total | 2703 | 541 | 315 | 134 | 123 | 622 | 968 |

STEYNING RURAL SANITARY DISTRICT.

TABLE 2.—Showing the Deaths and Death-rate in each of the ten years, 1883-92, from Zymotic Diseases.

| YEAR. | Small Pox. | Measles. | Scarlatina. | Diphtheria. | Whoop-cough. | Con. Fevers. | | | Diarrhoea and Dysentery. | Rheumatic Fever. | Erysipelas. | Pyæmia. | Puerperal Fever. | TOTAL. | Rate per 1000 persons living. |
|-------|------------|----------|-------------|-------------|--------------|--------------|----------|--------|--------------------------|------------------|-------------|---------|------------------|--------|-------------------------------|
| | | | | | | Typhus. | Enteric. | Other. | | | | | | | |
| 1883 | ... | 4 | 7 | 16 | 3 | 1 | 7 | ... | 7 | 1 | ... | ... | ... | 46 | 2·7 |
| 1884 | ... | 3 | 10 | 5 | ... | ... | 6 | ... | 17 | ... | 1 | ... | 2 | 44 | 2·4 |
| 1885 | ... | 3 | 8 | 2 | 12 | 2 | 2 | ... | 5 | 1 | 1 | ... | ... | 36 | 1·9 |
| 1886 | ... | 3 | ... | 2 | 14 | 1 | 5 | ... | 13 | ... | 2 | 1 | ... | 41 | 2·2 |
| 1887 | ... | ... | 1 | 2 | ... | 2 | 3 | ... | 16 | ... | 1 | 2 | ... | 27 | 1·4 |
| 1888 | ... | ... | 1 | 3 | 8 | ... | ... | ... | 3 | ... | 2 | ... | ... | 17 | 0·9 |
| 1889 | ... | ... | ... | 3 | ... | ... | 3 | ... | 4 | 3 | ... | 1 | ... | 14 | 0·7 |
| 1890 | ... | 3 | ... | 3 | 7 | ... | 5 | ... | 9 | ... | 1 | ... | 1 | 29 | 1·5 |
| 1891 | ... | 8 | ... | 6 | 8 | ... | 1 | ... | 6 | 3 | ... | ... | ... | 32 | 1·6 |
| 1892 | ... | 3 | ... | 8 | 21 | ... | 1 | ... | 6 | 1 | 1 | ... | ... | 41 | 2·0 |
| Tl. | | 27 | 27 | 50 | 73 | 6 | 33 | | 86 | 9 | 9 | 4 | 3 | 327 | 1·7 |

STEYNING RURAL SANITARY DISTRICT.

TABLE 3.—Showing the Deaths and Death-rate from all causes and from various causes in the ten years, 1883-92.

| YEAR | Deaths during the 10 years 1883-92, from | | | | | | Annual Death-rate per 100,000 living from | | | | |
|-----------|---|--------------|--------------------|----------|--------------|---------------|--|--------------------|----------|--------------|---------------|
| | Population in middle of period | All Diseases | Zymotic Disease | Phthisis | Lung Disease | Heart Disease | All Diseases | Zymotic Disease | Phthisis | Lung Disease | Heart Disease |
| 1883..... | 17000 | 279 | 46 | 29 | 37 | 23 | 1641 | 270 | 170 | 217 | 135 |
| 1884..... | 17850 | 263 | 44 | 30 | 32 | 24 | 1473 | 246 | 168 | 179 | 134 |
| 1885..... | 18160 | 260 | 36 | 24 | 50 | 20 | 1431 | 198 | 132 | 275 | 110 |
| 1886..... | 18300 | 291 | 41 | 30 | 41 | 19 | 1590 | 224 | 164 | 224 | 103 |
| 1887..... | 18400 | 252 | 27 | 22 | 38 | 17 | 1369 | 146 | 120 | 206 | 92 |
| 1888..... | 18610 | 242 | 17 | 21 | 36 | 28 | 1300 | 91 | 112 | 193 | 105 |
| 1889..... | 18700 | 213 | 14 | 20 | 35 | 22 | 1139 | 75 | 107 | 187 | 118 |
| 1890..... | 18810 | 281 | 29 | 19 | 47 | 28 | 1494 | 154 | 101 | 250 | 149 |
| 1891..... | 19100 | 305 | 32 | 13 | 58 | 27 | 1597 | 167 | 68 | 303 | 141 |
| 1892..... | 19340 | 317 | 41 | 15 | 53 | 33 | 1639 | 207 | 77 | 274 | 170 |

(A)—Table of DEATHS during the Year 1892, in the Rural Sanitary

| Names of Localities adopted for the purpose of these Statistics; Public Institutions being shown as separate localities. (a) | MORTALITY FROM ALL CAUSES, AT SUBJOINED AGES. | | | | | | | (i) | 1 | 2 | 3 |
|---|--|----------------------|-----------------------|------------------------|-------------------------|-------------------------|------------------------|--------------------------------|-------------------|--------------------|--------------------|
| | At all ages. (b) | Under 1 year. (c) | 1 and under 5. (d) | 5 and under 15. (e) | 15 and under 25. (f) | 25 and under 65. (g) | 65 and upwards. (h) | | Small Pox. (i) | Scarlatina. (j) | Diphtheria. (k) |
| Portslade Parish | 91 | 32 | 15 | 5 | 3 | 19 | 17 | Under 5 5 upwards. | | | |
| Aldrington Parish | 34 | 3 | 3 | | 5 | 12 | 11 | Under 5 5 upwards. | | | |
| Southwick Parish | 48 | 15 | 9 | 3 | 1 | 7 | 13 | Under 5 5 upwards. | | | |
| Rest of Shoreham sub-district | 41 | 4 | 5 | 2 | 1 | 16 | 13 | Under 5 5 upwards. | | | |
| Steyning Parish | 23 | 4 | | 1 | 1 | 10 | 7 | Under 5 5 upwards. | | | |
| Henfield Parish | 22 | 4 | 5 | | | 6 | 7 | Under 5 5 upwards. | | | |
| Rest of Steyning sub-district | 39 | 7 | 3 | 1 | 2 | 12 | 14 | Under 5 5 upwards. | | | |
| Hangleton Hospital | 1 | | | 1 | | | | Under 5 5 upwards. | | | |
| | | | | | | | | Under 5 5 upwards. | | | |
| | | | | | | | | Under 5 5 upwards. | | | |
| TOTALS | 299 | 69 | 40 | 13 | 13 | 82 | 82 | Under 5 5 upwards. | | | |

The subjoined numbers have also to be taken into

| | | | | | | | | | | | |
|---|----|---|---|---|---|---|----|--------------------------------|--|--|--|
| Deaths occurring outside the District among persons belonging thereto..... | 19 | — | — | — | — | 3 | 16 | Under 5 5 upwards. | | | |
| Deaths occurring within the District among persons not belonging thereto..... | 1 | — | — | 1 | — | — | — | Under 5 5 upwards. | | | |

(B)—Table of POPULATION, BIRTHS, AND OF NEW CASES OF
of Health, during the year 1892, in the Rural Sanitary District

| Names of Localities adopted for the purpose of these Statistics; Public Institutions being shown as separate localities. | POPULATION AT ALL AGES. | | Registered Births. | Aged under 5 or over 5. | NEW CASES COMING TO THE KNOWLEDGE OF THE Sanitary Authorities. | | | | |
|--|----------------------------|---|--------------------|--------------------------------|--|------------------|------------------|---------------------------|--------------------------|
| (a) | Census 1891. (b) | Esti- mated to mid- dle of 1892. (c) | (d) | (e) | 1 Small Pox. | 2 Scarlatina. | 3 Diphtheria. | 4 Membranous Croup. | 5 Epidemic Typhus. |
| Portslade Parish..... | 4236 | 4280 | 155 | Under 5 5 upwards. | | 4 18 | 2 7 | | |
| Aldrington Parish..... | 2206 | 2450 | 64 | Under 5 5 upwards. | | 1 2 | | | |
| Southwick Parish..... | 2558 | 2560 | 81 | Under 5 5 upwards. | | | 2 12 | 1 | |
| Rest of Shoreham sub-district... | 3977 | 4000 | 85 | Under 5 5 upwards. | | | 3 3 | | |
| Steyning Parish..... | 1705 | 1710 | 39 | Under 5 5 upwards. | | | 1 2 | | |
| Henfield Parish..... | 2006 | 2010 | 39 | Under 5 5 upwards. | | 1 4 | | | |
| Rest of Steyning sub-district ... | 2336 | 2330 | 64 | Under 5 5 upwards. | | | 3 | | |
| Hangleton Hospital..... | 6 | | | Under 5 5 upwards. | | | | | |
| | | | | Under 5 5 upwards. | | | | | |
| | | | | Under 5 5 upwards. | | | | | |
| | | | | Under 5 5 upwards. | | | | | |
| TOTALS | 19030 | 19340 | 527 | Under 5 5 upwards. | | 6 34 | 7 24 | 1 | |

INFECTIOUS SICKNESS, coming to the knowledge of the Medical Officer
STEYNING; classified according to DISEASES, AGES, and LOCALITIES.

| SICKNESS IN EACH LOCALITY, EDGE OF THE MEDICAL OFFICER HEALTH. | | | | | | | | | | | | | NUMBER OF SUCH CASES REMOVED FROM THEIR HOMES IN THE SEVERAL LOCALITIES FOR TREATMENT IN ISOLATION HOSPITAL. | | | | | | | | | | | | |
|--|------------|------------|------------|----------|-------------|----|----|------------|-------------|-------------|----------------------|---------|--|------------|------------|------------|----------|-------------|----|----|--|--|--|--|--|
| 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | | | | | |
| FEVERS. | | | | Cholera. | Erysipelas. | | | Small Pox. | Scarlatina. | Diphtheria. | Membranous Croup. | FEVERS. | | | | | Cholera. | Erysipelas. | | | | | | | |
| Enteric or Typhoid. | Continued. | Relapsing. | Puerperal. | | | | | | | | | Typhus. | Enteric or Typhoid. | Continued. | Relapsing. | Puerperal. | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | |
| 9 | | | | | 3 | | | | | | | | | | | | | | | | | | | | |
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| 3 | | | | | 1 | | | | | | | | | | | | | | | | | | | | |
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| 5 | | | | | | | | | | | | | | | | | | | | | | | | | |
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| 20 | | | 1 | | 12 | | | | | | | | | | | | | | | | | | | | |

(The "H" shows where the Infectious Hospital is.)

HORSHAM
RURAL SANITARY DISTRICT.

pp. 27 et seq.

RURAL SANITARY DISTRICT OF HORSHAM.

| | |
|--------------------------------|--------|
| POPULATION IN 1871 | 14,215 |
| „ „ 1881 | 15,426 |
| „ „ 1891 | 16,248 |
| AREA IN ACRES | 69,706 |
| NUMBER OF HOUSES IN 1871 | 2,781 |
| „ „ 1881 | 3,013 |
| „ „ 1891 | 3,297 |

POPULATION.

The census returns for 1891 show an increase of 822 persons over those living in 1881, but the increase is less than it was in the previous decade. In the south sub-district the population is stationary. In the north sub-district there is an increase, which is due entirely to the growth of Ifield. In the west sub-district there is a slight increase in each parish.

The actual figures are these :—

| | 1871. | 1881. | 1891. |
|--------------------------|-------|-------|-------|
| South sub-district | 2957 | 4083 | 4051 |
| North sub-district | 6439 | 7403 | 8017 |
| West sub-district | 3810 | 3940 | 4180 |
| | ----- | ----- | ----- |
| Total | 14215 | 15426 | 16248 |
| Increase | | 1211 | 822 |

BIRTHS AND BIRTH-RATE.

During the year 1892, the births of 399 children were registered ; of these 225 were male, and 174 were female.

Estimating the population in the middle of the year at 16,350 the birth-rate was equal to 24·4 per 1,000 persons living, a rate lower than that in any previous year.

The births and birth-rate during the past ten years have been as follows :

| Year. | | Births. | | Birth-rate. | Year. | | Births. | | Birth-rate. |
|-------|-----|---------|-----|-------------|-------|-----|---------|-----|-------------|
| 1883 | ... | 480 | ... | 30·7 | 1888 | ... | 454 | ... | 28·3 |
| 1884 | ... | 546 | ... | 34·7 | 1889 | ... | 418 | ... | 26·0 |
| 1885 | ... | 429 | ... | 27·1 | 1890 | ... | 420 | .. | 26·0 |
| 1886 | ... | 496 | ... | 31·2 | 1891 | ... | 567 | ... | 28·7 |
| 1887 | ... | 452 | ... | 28·3 | 1892 | ... | 399 | ... | 24·4 |

The mean number of births is 456, and the mean birth-rate is 28·5 per 1,000 of population.

In England and Wales the birth-rate during the year was 30·5 per 1,000 persons living, a rate 1·7 per 1,000 below the mean rate in the ten years 1882—91.

The following table shows the births and birth-rate in each locality during the past two years :—

| | Births. | | | Birth-rate. | |
|----------------------------|---------|-------|-----|-------------|-------|
| | 1891. | 1892. | | 1891. | 1892. |
| South sub-district | 107 | 89 | ... | 26·4 | 22·0 |
| Ifield Parish | 83 | 86 | ... | 29·2 | 29·4 |
| Rest of North sub-district | 152 | 126 | ... | 29·2 | 24·3 |
| West sub-district | 125 | 98 | ... | 29·9 | 23·3 |
| Total..... | 467 | 399 | | 28·7 | 24·4 |

GENERAL MORTALITY.

There were 404 deaths registered in this district during the year 1892, but from this number must be deducted the deaths of 5 persons in Horsham workhouse, who came from the Horsham Urban Sanitary District; the remaining 38 workhouse deaths were distributed among the several parishes whence each inmate came, viz., West Grinstead 1, Shipley 1, Nuthurst 4, Horsham 11, Lower Beeding 4, Ifield 3, Rusper 4, Slinfold 2, Rudgwick 2, Billingshurst 6, in all 38.

Estimating the population in the middle of the year at 16,350 the death-rate was equal to 17·7 per 1,000 persons living, a rate which is considerably higher than the mean of the past ten years.

The variations in the death-rate during the past 10 years have been as follows :—

| Year, | Deaths. | Death-rate. | Year. | Deaths. | Death-rate. |
|----------|---------|-------------|----------|---------|-------------|
| 1883 ... | 202 | 12·9 | 1888 ... | 215 | 13·6 |
| 1884 ... | 217 | 13·8 | 1889 ... | 213 | 13·2 |
| 1885 ... | 228 | 14·4 | 1890 ... | 210 | 12·9 |
| 1886 ... | 291 | 18·3 | 1891 ... | 240 | 14·7 |
| 1887 ... | 209 | 13·1 | 1892 ... | 289 | 17·7 |

Thus the mean annual number of deaths is 232, and the mean annual death-rate is 14·4 per 1,000 of the population. During the same period there were 4,561 births, so that the natural increase of population by excess of births over deaths was 2,243, the births being more than twice as numerous as the deaths. In 1881 the population was 15,426; adding to this number the excess of births over deaths, there would be a population of 17,848. The actual figures of the census of 1891 were 16,248, so that a large number of persons must have left the district during the past decade.

In country places throughout England and Wales the mortality in 1892 was equal to 18·1 per 1,000 of population.

In each locality the deaths and death-rate are here shown for the past two years :—

| | Deaths. | | | Death-rate. | |
|--------------------------------|---------|-------|-----|-------------|-------|
| | 1891. | 1892. | | 1891. | 1892. |
| South sub-district | 72 | 65 | ... | 15·3 | 16·0 |
| Ifield Parish | 33 | 40 | ... | 11·6 | 13·7 |
| Rest of north sub-district ... | 80 | 106 | ... | 15·4 | 20·4 |
| West sub-district | 55 | 78 | ... | 13·1 | 18·6 |
| Total..... | 240 | 289 | | 14·7 | 17·7 |

As the occupation and the age distribution of the population are very similar in each sub-district, the death-rate does not show much variation.

In each parish the deaths were thus distributed :—

| | | | | |
|----------------------|------|-----|---------------------|----|
| Horsham (south) ... | 5 | ... | Crawley | 5 |
| West Grinstead | 25 | ... | Rusper | 13 |
| Shipley..... | 19 | ... | Warnham | 17 |
| Nuthurst | 16 | ... | Slinfold | 10 |
| Horsham (north) ... | 52 | ... | Itchingfield..... | 4 |
| Lower Beeding | 19 | ... | Rudgwick | 30 |
| Ifield..... | 40 | ... | Billingshurst | 34 |
| Total ... | 289. | | | |

INFANT MORTALITY.

The *infant mortality* is here given as measured by the number of deaths under one year of age to the total number of births in the year :—

| | Births | Deaths under one year | Ratio to 1000 Births |
|---------------------------------|--------|--------------------------|-------------------------|
| South sub-district | 89 | 7 | 78 |
| Ifield Parish | 86 | 7 | 70 |
| Rest of North sub-district..... | 126 | 23 | 182 |
| West sub-district | 98 | 12 | 122 |
| | <hr/> | <hr/> | <hr/> |
| Total..... | 399 | 49 | 122 |

The 49 *infantile* deaths included one from measles, three from whooping-cough, one from diarrhoea, eight from convulsions, twelve from lung diseases, seven from debility, five from marasmus, two from malformation, and one from an accident ; nine infants were born prematurely.

The ratio in the three previous years was 112, 76 and 85.

In England and Wales the proportion of deaths under one year of age to registered births was 148 per 1,000 during the past year, the mean proportion in the preceding ten years having been 144.

ZYMOTIC MORTALITY.

The deaths from zymotic diseases were 3 in number in the case of those which are notifiable, and 13 in the other class where the number of cases cannot be obtained.

| | Cases. | Deaths. |
|-----------------------|-----------------|---------|
| Small-pox | none | none |
| Scarlatina | 33 | none |
| Diphtheria | 13 | none |
| Membranous Croup..... | none | none |
| Fever { | Typhus | none |
| | Enteric | 3 |
| | Continued..... | none |
| | Relapsing | none |
| | Puerperal | none |
| | Cholera..... | none |
| | Erysipelas..... | 5 |
| | <hr/> | <hr/> |
| Total | 54 | 3 |

In the other class the deaths were as follows :—

| | Deaths. |
|-------------------------------|---------|
| Measles | 5 |
| Whooping Cough | 5 |
| Diarrhoea and Dysentery | 1 |
| Rheumatic Fever | 2 |
| | — |
| Total | 13 |

Adding the two classes together there is a total of 16 deaths with a zymotic mortality of 1·0 per 1,000.

The prevalence in each quarter of each notifiable disease is shown in the following table :—

| | 1st Qr. | | 2nd Qr. | | 3rd Qr. | | 4th Qr. | | Year | | Total |
|---------------------|---------|------|---------|------|---------|------|---------|------|-------|------|-------|
| | under | over | under | over | under | over | under | over | under | over | |
| | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| Scarlatina | ... | 3 | ... | 3 | 1 | 2 | 5 | 19 | 6 | 27 | 33 |
| Diphtheria | ... | 5 | ... | ... | ... | 6 | ... | 2 | ... | 13 | 13 |
| Enteric Fever | ... | ... | ... | ... | ... | 2 | ... | 1 | ... | 3 | 3 |
| Erysipelas..... | ... | 1 | ... | ... | ... | 1 | ... | 3 | ... | 5 | 5 |
| | — | — | — | — | — | — | — | — | — | — | — |
| Total..... | ... | 9 | ... | 3 | 1 | 11 | 5 | 25 | 6 | 48 | 54 |

The Notification of Infectious Disease came into operation on April 2nd, 1890. There is no Isolation Hospital in the District.

SCARLATINA never prevailed in an epidemic form, but it appeared in 21 houses during the year in the various parishes of this scattered district. In one house 5 persons fell ill, in one house 4 were attacked, in one house 3, in 5 houses 2, and in 11 houses only one inmate had the disorder. The cases were very mild and no one died. Twelve out of the thirty-three cases were amongst persons over 16 years of age, and some of them were married people in middle life. These, so far as they could recollect, had not had scarlet fever in early life. There was no spread of the disease from house to house, but this was due to the naturally isolated position of each dwelling. In the absence of an isolation hospital, the cottage becomes the isolation unit, and as in country districts each cottage or pair of cottages are generally built back from the road, and surrounded by a garden, the separation from other families seems sufficient for practical purposes.

DIPHTHERIA caused no deaths. It appeared in a mild form in different parishes in houses at long distances apart and where the inmates had no communication with each other. There were three cases in one house, two in another, and eight instances in which only one inmate was attacked. In no case was there any spread of the disease.

Each house in the above cases was visited, the usual precautions were taken, and the rooms were in due course fumigated and cleansed.

ENTERIC FEVER caused also no deaths. There was a single case in each of three houses at different times of the year, and no one else was attacked.

INFLUENZA was very prevalent in the first quarter of the year, causing 18 deaths against 3 in 1890. Lung diseases were also very common. The general mortality was thus much increased, there being 126 deaths from all causes, against 72 and 73 in the two previous years. 16 out of the 18 deaths, were amongst persons over 40 years of age. It prevailed generally throughout the whole district, and it was most severe in Rudgwick.

WATER SUPPLY.

There is a reservoir near the Horsham Workhouse, which is supplied from the town, and several houses near obtain water from this source. This is the only public supply in the district. In all other cases the water is obtained from deep or shallow wells, from springs, dipping holes, ponds or rain water tanks. The wells vary much in depth, some being only 12 feet deep, while others may be sunk 100 feet or more. At Shipley and Kingsfold it is very difficult to obtain good water, for even when deep wells are provided, the supply may turn out to be so brackish as to be unfit for drinking purposes.

Eight samples of water were found to be more or less polluted from surface water getting in, owing to defective kerbing, or to the wells requiring to be cleaned out. Many shallow well waters were improved by pumping out the contents, cleaning the sides and bottom, and throwing in lime.

Sixty new houses were provided with good and wholesome water during the year, and the usual certificate was given prior to occupation.

46 houses were provided with 31 wells.

10 houses were supplied from the Horsham Waterworks.

2 houses were supplied from the Public Reservoir.

1 house was supplied from a Private Reservoir.

1 house was supplied from a Rain Water Tank.

DRAINAGE AND SEWAGE.

The villages in this district, except Warnham, have no main system of sewage disposal. The chief works of this kind are at Ifield and Crawley, an account of which is given below. Most of the houses are so scattered, and so many of the cottages are surrounded by gardens that it is an easy matter to deal on the soil with any sewage matter. Earth closets are not often met with as they are not approved of in this district. The simplest form of closet in use is one having a small, covered cesspit at the back into which earth or ashes can be readily thrown; being small, it must be often cleansed, while it is so made as to keep off rain and sunshine, at the same time allowing plenty of air to pass through. There is a general improvement in recent years, and by degrees all large cesspools are given up, and there is much more care taken in the cleanliness of the surroundings than at former periods.

SCAVENGING AND CLEANSING.

I have advised that at Ifield and Crawley the powers confined by Sect. 42 of the Public Health Act (1875) should be put in force, as there are many small populous areas which have back yards, and when there are no means of dealing with house refuse except by occasional removal. This removal is not carried out with regularity or sufficient care, but if a contract were entered into by the authority for the weekly removal of such matter, the work would be better done.

In other parts of the district there is not the same difficulty, as there is generally sufficient land around or near the house on which any refuse can be utilised.

IFIELD AND CRAWLEY DRAINAGE.

The condition of the farm is improved since my last report. A fair crop of rye grass was obtained from a portion of it, and more land has been brought into cultivation. A description of the

system was given in the Annual Report for last year, so that it need not be repeated here. No nuisance is now complained of from the effluent passing into the ditches of any neighbouring land. The place has been constantly looked after by the Sanitary Inspector, and it promises to improve year by year. The main sewer has been extended at West Green, Ifield, by laying down 84 yards of nine-inch pipe drain in Alpha Road, which carries away the drainage from nine cottages in South View, which formerly used to flow into two large cesspools, whence the overflow passed on into a ditch. The nuisance is now abated, and the cesspools have been cleaned out and filled up. The bell traps to these houses have been taken out and replaced by gully traps, and the drain has been properly ventilated, so that the cottages are now in a clean and wholesome condition. During the year twenty new house connections were made with the new sewer.

In Perryfield Road there are four villas which drain into cesspools, whence the overflow passes down into the Worth Lane Ditch. This nuisance would be remedied if the main sewer were extended down this road, and proper house connections were made.

The following extract from Mr. Brooks's report for the year ending March 25, 1892, is of interest :—

The piece of land that was used for the filter bed, previous to March, 1891 (which had become very foul indeed), I have laid dry, the coarse grass has been burnt, and portions of the land levelled, and the whole piece (about $1\frac{1}{4}$ acres) sown with rye grass, and there is now a fair crop growing and ready to be cut.

I have constructed seven large pits, and the whole of the sewage passes through all of these pits, and the solids are deposited—the effluent water is then passed over the land—by these means and with constant care and attention, I have been able to keep the effluent water from becoming a nuisance.

Five of these pits are emptied on an average every week, and the solids are taken out and put into pits to dry; this occupies a large portion of the man's time, as they are obliged to be emptied with a pail. There is now a large quantity of the sludge which must be disposed of to make room for more.

I have made 83 visits to the Farm during the year. This may seem a large number of visits, but I was anxious to ensure that every care was taken to prevent a nuisance arising, and this is an extremely difficult task in very dry weather, there being no flow of water in the ditch to carry off the effluent water from the Farm.

The following is a summary of expenditure on the Farm during the year :—

| | £ | s. | d. |
|-------------------------------------|-------|----|----|
| Labour | 51 | 11 | 3 |
| Hire of planks, &c. | | 18 | 0 |
| Rye grass, seed and sowing, &c. ... | | 16 | 0 |
| Tools | | 8 | 10 |
| | <hr/> | | |
| | £53 | 14 | 1 |

SYSTEMATIC INSPECTION.

The various parts of this district have been frequently visited during the past year, and the amount of work done is summarised in the Sanitary Inspector's report, which is given below.

The work done in this district is very good.

The greater part of the nuisances have, as usual, been abated without any formal notice being required.

The amount of work recorded by Mr. Moses Brooks, the Sanitary inspector, is shown in the following summary :—

| | |
|--|------|
| No. of Houses, &c., inspected | 1008 |
| No. of Nuisances reported | 398 |
| No. of Nuisances abated without notice ... | 230 |
| No. of Nuisances abated with notice ... | 156 |
| No. now in course of abatement | 12 |
| Houses reported as unfit for human habitation | 4 |
| Houses cleansed and disinfected | 27 |
| Houses cleansed and limewashed | 55 |
| Water certificates granted for new houses ... | 38 |
| Wells dug | 35 |
| Tanks provided | 4 |
| Water laid on from Horsham waterworks ... | 10 |
| Wells closed | 3 |
| Wells cleansed | 15 |
| No. of samples of water analysed | 18 |
| No. of samples of water found polluted... | 8 |
| Cases of overcrowding reported... | 8 |
| Cases of overcrowding abated | 8 |
| Unwholesome food seized | none |
| Legal proceedings | none |
| New closets erected | 7 |
| Old closets converted into earth closets ... | 9 |
| Old closets provided with proper cesspits ... | 6 |
| Houses connected with Ifield and Crawley main sewer | 20 |

COWSHEDS AND DAIRIES.

There are 54 registered cowsheds and dairies, and in these there are kept about 690 cows, the number slightly varying from time to time. Many of these sheds contain from 40 to 80 cows on a farm, and they are very well kept, care being taken that there is an ample supply of good water, plenty of light and ventilation, frequent removal of refuse and cleansing of the walls and floor.

The cows in many cases are kept in the open field for the the greater part of the year, the cowsheds being used at night.

The sheds have been frequently inspected, 120 visits were made, and they have been well kept.

MARGARINE ACT.

Very little margarine is sold here by the grocers, and where it can be obtained the regulations of the Act have been complied with. There seems to be no demand for this substance on the part of the scattered agricultural population.

BAKEHOUSES.

These are 38 in number ; they have been often inspected, and they have been well kept. There is no bakehouse on a large scale, and the chief duty is to see that they are frequently cleansed and limewashed. In each case there is a good amount of light and air, and in no case is there any drain within the building.

SLAUGHTERHOUSES.

These are 19 in number, and they are very well kept, as regards cleanliness and removal of refuse. In many instances animals are killed only once or twice a week, so that there is no difficulty in keeping them clean and tidy. Each slaughterhouse is often lime-washed, and the blood is generally removed at once for use in a garden.

INQUESTS were held in 16 cases:—Female, 3 months, accidentally suffocated in bed ; male, 77 years, heart disease ; male, 45 years, suffocated in a ditch of water ; male, 11 years, accidentally drowned ; male, 46 years, accidental fall ; male, 32 years, poisoned by taking a dose of weed killer ; male, 16 years, accidentally drowned ; male, 22 years, accidentally drowned ; male, 7 years, syncope ; female, 8 years, blood poisoning ; male, 58 years, heart disease ; female, 21 years, suicide by drowning ; male, 58 years, syncope ; male, 1 year, accidentally killed on the railway ; male, 51 years, inflammation of the lungs ; male, 3 years, whooping-cough.

There were three deaths returned as “not certified” out of a total of 289 deaths:—male, 77 years, apoplexy ; female, 7 months, convulsions ; male, 74 years, bronchitis.

HORSHAM RURAL SANITARY DISTRICT.

TABLE I.—Showing the Deaths at various groups of ages in the
ten years, 1883-92.

| Year. | At all Ages. | Under 1 Year. | 1 to 5. | 5 to 15. | 15 to 25. | 25 to 60. | 60 and over. |
|-------------|--------------|---------------|---------|----------|-----------|-----------|--------------|
| 1883..... | 202 | 32 | 15 | 9 | 8 | 61 | 77 |
| 1884..... | 217 | 38 | 18 | 14 | 18 | 49 | 86 |
| 1885..... | 228 | 38 | 31 | 12 | 14 | 45 | 88 |
| 1886..... | 291 | 61 | 51 | 20 | 14 | 48 | 97 |
| 1887..... | 209 | 46 | 15 | 12 | 8 | 45 | 83 |
| 1888..... | 219 | 37 | 16 | 13 | 14 | 53 | 86 |
| 1889..... | 213 | 32 | 17 | 20 | 12 | 36 | 96 |
| 1890..... | 210 | 47 | 11 | 11 | 12 | 47 | 82 |
| 1891..... | 240 | 40 | 27 | 10 | 11 | 45 | 107 |
| 1892.. | 289 | 49 | 25 | 15 | 16 | 61 | 123 |
| Total | 2318 | 420 | 226 | 136 | 121 | 490 | 925 |

HORSHAM RURAL SANITARY DISTRICT.

TABLE 2.—Showing the Deaths and Death-rate in each of the ten years, 1883-92, from Zymotic Diseases.

| YEAR. | Small Pox. | Measles. | Scarlatina. | Diphtheria. | Whoop-cough. | Con. Fevers. | | | Diarrhoea and Dysentery. | Rheumatic Fever. | Erysipelas. | Pyæmia. | Puerperal Fever. | TOTAL. | Rate per 1000 persons living. |
|-------|------------|----------|-------------|-------------|--------------|--------------|----------|--------|--------------------------|------------------|-------------|---------|------------------|--------|-------------------------------|
| | | | | | | Typhus. | Enteric. | Other. | | | | | | | |
| 1883 | ... | 2 | 1 | ... | 5 | ... | 1 | ... | 5 | 1 | 3 | ... | 2 | 17 | 1·0 |
| 1884 | ... | ... | ... | 10 | ... | 1 | 1 | ... | 5 | ... | ... | 1 | ... | 18 | 1·1 |
| 1885 | ... | ... | 1 | 12 | 5 | ... | ... | 1 | 3 | ... | 1 | ... | ... | 23 | 1·4 |
| 1886 | 1 | 23 | 3 | 4 | 15 | ... | ... | ... | 8 | ... | ... | ... | ... | 54 | 3·4 |
| 1887 | ... | ... | 4 | 4 | ... | ... | 2 | 2 | 5 | ... | ... | ... | ... | 17 | 1·0 |
| 1888 | ... | ... | 1 | ... | 5 | ... | ... | ... | 5 | ... | 2 | 1 | ... | 14 | 0·8 |
| 1889 | ... | ... | ... | 1 | 4 | ... | ... | ... | 1 | 2 | ... | ... | ... | 8 | 0·5 |
| 1890 | ... | 4 | 1 | 2 | 4 | 1 | 1 | ... | 2 | ... | ... | ... | ... | 15 | 0·8 |
| 1891 | ... | 3 | 1 | 3 | 4 | ... | 2 | ... | 2 | ... | ... | ... | 1 | 16 | 1·0 |
| 1892 | ... | 5 | ... | ... | 5 | ... | ... | ... | 1 | 2 | 3 | ... | ... | 16 | 1·0 |
| Tl. | 1 | 37 | 12 | 36 | 47 | 2 | 7 | 3 | 34 | 5 | 9 | 2 | 3 | 198 | 1·2 |

(A)—Table of DEATHS during the Year 1892, in the Rural Sanitary District of Horsham.

| Names of Localities adopted for the purpose of these Statistics; Public Institutions being shown as separate localities. (a) | MORTALITY FROM ALL CAUSES, AT SUBJOINED AGES. | | | | | | | (i) | 1 | 2 |
|---|--|----------------------|-----------------------|------------------------|-------------------------|-------------------------|------------------------|-----------------------|-------------------|--------------------|
| | At all ages. (b) | Under 1 year. (c) | 1 and under 5. (d) | 5 and under 15. (e) | 15 and under 25. (f) | 25 and under 65. (g) | 65 and upwards. (h) | | Small Pox. (i) | Scarlatina. (j) |
| South sub-district | 59 | 7 | 3 | 4 | 1 | 16 | 28 | Under 5 5 upwards. | | |
| Ifield Parish | 37 | 7 | 3 | 2 | 4 | 7 | 14 | Under 5 5 upwards. | | |
| Rest of North sub-district ... | 87 | 18 | 12 | 4 | 3 | 31 | 19 | Under 5 5 upwards. | | |
| West sub-district | 68 | 10 | 6 | 4 | 5 | 20 | 23 | Under 5 5 upwards. | | |
| Horsham Workhouse | 43 | 7 | 1 | 1 | 3 | 7 | 24 | Under 5 5 upwards. | | |
| | | | | | | | | Under 5 5 upwards. | | |
| | | | | | | | | Under 5 5 upwards. | | |
| | | | | | | | | Under 5 5 upwards. | | |
| | | | | | | | | Under 5 5 upwards. | | |
| | | | | | | | | Under 5 5 upwards. | | |
| TOTALS | 294 | 49 | 25 | 15 | 16 | 81 | 108 | Under 5 5 upwards. | | |
| The subjoined numbers have also to be taken into consideration. | | | | | | | | | | |
| Deaths occurring outside the District among persons belonging thereto..... | — | — | — | — | — | — | — | Under 5 5 upwards. | | |
| Deaths occurring within the District among persons not belonging thereto..... | 5 | — | — | — | — | 1 | 4 | Under 5 5 upwards. | | |

(B)—Table of POPULATION, BIRTHS, AND OF NEW CASES OF
of Health, during the year 1892, in the Rural Sanitary District of

| Names of Localities adopted for the purpose of these Statistics; Public Institutions being shown as separate localities. (a) | POPULATION AT ALL AGES. | | Registered Births. (d) | Aged under 5 or over 5. (e) | NEW CASES OF COMING TO THE KNOWLEDGE OF | | | | |
|---|----------------------------|---|-------------------------------|--|---|---------------------------------|---------------------------------|--|-----------------------------|
| | Census 1891. (b) | Esti- mated to mid- dle of 1892. (c) | | | 1 Small Pox. (f) | 2 Scarlatina. (g) | 3 Diphtheria. (h) | 4 Membranous Croup. (i) | 5 Typhus. (j) |
| South sub-district | 4051 | 4050 | 89 | Under 5 5 upwards. | | 1 3 | | 4 | |
| Ifield Parish | 2840 | 2920 | 86 | Under 5 5 upwards. | | 4 | | | |
| Rest of North sub-district | 4995 | 5000 | 120 | Under 5 5 upwards. | | 4 19 | | 7 | |
| West sub-district | 4180 | 4200 | 98 | Under 5 5 upwards. | | 1 5 | | 2 | |
| Horsham Workhouse | 182 | 180 | 6 | Under 5 5 upwards. | | | | | |
| | | | | Under 5 5 upwards. | | | | | |
| | | | | Under 5 5 upwards. | | | | | |
| | | | | Under 5 5 upwards. | | | | | |
| | | | | Under 5 5 upwards. | | | | | |
| | | | | Under 5 5 upwards. | | | | | |
| | | | | Under 5 5 upwards. | | | | | |
| | | | | Under 5 5 upwards. | | | | | |
| TOTALS | 16248 | 16350 | 399 | Under 5 5 upwards. | | 6 27 | | 13 | |

PETWORTH
RURAL SANITARY DISTRICT.

pp. 45 et seq.

RURAL SANITARY DISTRICT OF PETWORTH.

| | |
|--------------------------------|--------|
| POPULATION IN 1871 | 10,147 |
| „ „ 1881 | 9,595 |
| „ „ 1891 | 9,431 |
| AREA IN ACRES | 45,701 |
| NUMBER OF HOUSES IN 1871 | 2,008 |
| „ „ 1881 | 1,995 |
| „ „ 1891 | 2,001 |

POPULATION.

The census returns show a decrease of 164 persons. The decline is less than in the previous decade, when it was 552.

This may partly be accounted for by the closing of Petworth Gaol in 1879. Between 1861 and 1871 there was a very slight increase, but since then, owing probably to the agricultural depression, a steady fall has taken place. In five parishes, all of which are in the South sub-district there has been a slight rise; in the remaining nine parishes there has been a diminution

The changes in the population during the past twenty years are here shown, and they correspond closely to the changes taking place in the neighbouring district of Thakeham, which contains a population of a similar character as regards mode of living and occupation.

| | 1871. | 1881. | 1891. |
|----------------------------|-------|-------|-------|
| North sub-district | 4354 | 4160 | 4019 |
| Petworth Parish | 3304 | 2942 | 2867 |
| Rest of South sub-district | 2489 | 2493 | 2545 |
| | <hr/> | <hr/> | <hr/> |
| Total | 10147 | 9595 | 9431 |

BIRTHS AND BIRTH-RATE.

During the year 1892 the births of 214 children were registered; of these, 109 were male, and 105 female.

Estimating the population in the middle of the year at 9,420, the birth-rate was equal to 22·7 per 1,000 persons living, a rate lower than that recorded in any previous year.

The births and birth-rate during the past ten years have been as follows :

| Year. | | Births. | | Birth-rate. | Year. | | Births. | | Birth-rate. |
|-------|-----|---------|-----|-------------|-------|-----|---------|-----|-------------|
| 1883 | ... | 262 | ... | 27·5 | 1888 | ... | 240 | ... | 25·1 |
| 1884 | ... | 304 | ... | 31·8 | 1889 | ... | 263 | ... | 27·5 |
| 1885 | ... | 246 | ... | 25·7 | 1890 | ... | 223 | ... | 23·5 |
| 1886 | ... | 284 | ... | 29·7 | 1891 | ... | 251 | ... | 26·6 |
| 1887 | ... | 264 | ... | 27·6 | 1892 | ... | 214 | ... | 22·7 |

The mean number of births is 255, and the mean birth-rate is 26·8 per 1,000 of population.

In England and Wales the birth-rate during the year was 30·5 per 1,000 persons living, a rate 1·7 per 1,000 below the mean rate in the ten years 1882-91.

The following table shows the births and birth-rate in each locality during the past two years :—

| | Births. | | | Birth-rate. | |
|--------------------------------|---------|-------|-----|-------------|-------|
| | 1891. | 1892. | | 1891. | 1892. |
| North sub-district | 108 | 95 | ... | 26·9 | 23·7 |
| Petworth Parish | 76 | 68 | ... | 26·5 | 23·7 |
| Rest of South sub-district ... | 67 | 51 | ... | 26·3 | 20·0 |
| Total..... | 251 | 214 | | 26·6 | 22·7 |

GENERAL MORTALITY.

There were 163 deaths registered in this district in the year 1892 ; of these, three took place in Petworth workhouse, five in Wisborough Green Workhouse, and two in Petworth Cottage Hospital. These deaths have been distributed amongst the several parishes whence each inmate came :—viz., Wisborough Green 2, Northchapel 1, Kirdford 2, Petworth 2, Egdean 1, Duncton 1, Bury 1, in all 10.

Estimating the population in the middle of the year at 9,420, the death-rate was equal to 17·3 per 1,000 persons living.

The variations in the death-rate during the past 10 years have been as follows :—

| Year. | | Deaths. | | Death-rate. | Year. | | Deaths. | | Death-rate. |
|-------|-----|---------|-----|-------------|-------|-----|---------|-----|-------------|
| 1883 | ... | 171 | ... | 18·0 | 1888 | ... | 143 | ... | 14·9 |
| 1884 | ... | 140 | ... | 14·6 | 1889 | ... | 142 | ... | 14·8 |
| 1885 | ... | 155 | ... | 16·2 | 1890 | ... | 136 | ... | 14·3 |
| 1886 | ... | 202 | ... | 21·1 | 1891 | ... | 153 | ... | 16·2 |
| 1887 | ... | 131 | ... | 13·7 | 1892 | ... | 163 | ... | 17·3 |

Thus there have been during the above period 1,536 deaths and a mean mortality of 16·1 per 1,000. During the same period there were 2,551 births, so that the natural increase of population by excess of births over deaths was 1,015.

The recent census returns, however, show that there has been a *decrease* of 164, so that a large number of persons must have left this district during the last decade. Young adults migrate elsewhere for employment, and this exodus leaves an excessive amount of aged people in this area. As a consequence of this excess at advanced ages, the death-rate is raised about 2·0 per 1,000 beyond the rate of a standard population. Contrary to the general rule, there are more males than females living in this district, and that slightly raises the mortality, as the male death-rate is higher than the female death-rate.

In each locality the deaths and death-rate were as follows :—

| | Deaths. | | | Death-rate. | |
|----------------------------|---------|-------|-----|-------------|-------|
| | 1891. | 1892. | | 1891. | 1892. |
| South sub-district | 58 | 68 | ... | 14·4 | 16·9 |
| Petworth Parish..... | 61 | 53 | ... | 21·3 | 18·5 |
| Rest of South sub-district | 34 | 42 | ... | 13·3 | 16·5 |
| | <hr/> | <hr/> | | <hr/> | <hr/> |
| Total..... | 153 | 163 | | 16·2 | 17·3 |

In country places throughout England and Wales the mortality in 1892 was equal to 18·1 per 1,000 of population.

In each parish the deaths were thus distributed :—

| | | | | |
|----------------------|-----|------|--------------------|----|
| Wisborough Green ... | 35 | ... | Coates | 1 |
| Northchapel | 11 | ... | Burton | 2 |
| Kirdford | 22 | ... | Duncton | 2 |
| Petworth | 53 | ... | Barlavington | 2 |
| Egdean | 2 | ... | Sutton | 5 |
| Fittleworth | 10 | ... | Bignor | 2 |
| Stopham | 1 | ... | Bury | 15 |
| Total | ... | 163. | | |

INFANT MORTALITY.

The *infant mortality* is here given as measured by the number of deaths under one year of age to the total number of births in the year :—

| | Deaths under | | Ratio to |
|----------------------------------|--------------|-----------|--------------|
| | Births. | one year, | 1000 Births. |
| North sub-district | 95 | 10 | 104 |
| Petworth Parish | 68 | 5 | 73 |
| Rest of South sub-district | 51 | 3 | 59 |
| | <hr/> | <hr/> | <hr/> |
| Total | 214 | 18 | 84 |

The 18 *infantile* deaths included one from whooping-cough, three from convulsions, three from bronchitis, five from debility, one from marasmus, one from malformation, and one from an accident ; three infants were born prematurely.

In England and Wales the proportion of deaths under one year of age to registered births was 148 per 1,000 during the first year, the mean proportion in the preceding ten years being 144.

ZYMOTIC MORTALITY.

There were 7 deaths from zymotic diseases, of which four were among notifiable diseases and 3 in the other class. The rate of mortality was therefore equal to 0·7 per 1,000.

| | Cases. | Deaths. |
|-----------------------|-----------------|---------|
| Small-pox | none | none |
| Scarlatina | 12 | none |
| Diphtheria | 20 | 4 |
| Membranous Croup..... | 1 | none |
| Fever { | Typhus | none |
| | Enteric | 4 |
| | Continued..... | none |
| | Relapsing | none |
| | Puerperal | none |
| | Cholera... .. | none |
| | Erysipelas..... | 12 |
| Total | 49 | 4 |

The deaths in the other classes were as follows :—

| | Deaths. |
|------------------------------|---------|
| Measles | none |
| Whooping Cough | 3 |
| Diarrhœa and Dysentery | none |
| Rheumatic Fever | none |
| Total | 3 |

The Infectious Disease (Notification) Act, 1889, came into operation in this district on February 2, 1891.

Four cases of scarlet fever were removed to Flathurst Cottage Hospital during the year.

The prevalence in each quarter of each notifiable disease is shown in the following table :—

| | 1st Qr. | | 2nd Qr. | | 3rd Qr. | | 4th. Qr. | | Year | | Total |
|------------------------|---------|------|---------|------|---------|------|----------|------|-------|------|-------|
| | under | over | under | over | under | over | under | over | under | over | |
| | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| Scarlatina | ... | ... | ... | 5 | ... | 1 | 2 | 4 | 2 | 10 | 12 |
| Diphtheria | ... | 4 | ... | 1 | ... | 14 | ... | 1 | ... | 20 | 20 |
| Membranous Croup | ... | 1 | ... | ... | ... | ... | ... | ... | ... | 1 | 1 |
| Enteric Fever | ... | ... | ... | 2 | ... | 2 | ... | .. | ... | 4 | 4 |
| Erysipelas | ... | 1 | ... | 4 | ... | 3 | ... | 4 | ... | 12 | 12 |
| | — | — | — | — | — | — | — | — | — | — | — |
| Total..... | ... | 6 | ... | 12 | ... | 20 | 2 | 9 | 2 | 47 | 49 |

SCARLATINA appeared now and then during the year, but the cases were very mild and there were no deaths. It appeared at Stopham in one house with four cases, at Northchapel in one house with one case, at Wisborough Green in one house with one case, at Petworth in one house with five cases, and in another house with one case only. In the whole district twelve persons were attacked in five houses at great distances apart and at long intervals of time.

DIPHTHERIA affected twenty persons in thirteen houses, chiefly amongst children, and at Bury it caused four deaths. In March it appeared in two houses at Bury, when four children fell ill, of whom two died. There was some very cold inclement weather at the time, and those who died had been exposed to a snowstorm while returning from school. The chief cause seemed to be the insanitary condition of the closet at Bury School, a nuisance which was soon afterwards remedied. In July and September it appeared in six houses at Kirdford on the Weald Clay in the north part of the district, but all the cases recovered. It seemed to be associated with autumnal damps rising from the cold soil. Bury is also very liable to fogs and damp rising from the river, which flows close past the village.

In each of the above cases the house was visited, the usual precautions were taken, the children in the infected house were kept from school, and the rooms were afterwards fumigated and cleansed.

ENTERIC FEVER occurred in a single house in each of the months of May, June, August, and September, so that there were altogether four cases, but no deaths. No other inmates of these houses were attacked and there was no spread of the disease.

INFLUENZA was the cause of 16 deaths in 1892, against none in 1890. There was also an increase in the deaths from lung diseases, so that the deaths from all causes in the first quarter of the year were 71 in number, against 60 and 51 in the corresponding period of 1890 and 1891. 14 out of the 16 deaths were amongst persons over 40 years of age.

WATER SUPPLY.

The only place which has a public supply of water is the town of Petworth. This supply was given by Lord Leconfield ten years ago. Before that time water for ordinary purposes was obtained by pumping from the river Rother at a spot near Coultershaw Mill, nearly two miles south of the town. The water then passed into a reservoir near the old Gaol, whence people obtained what they required from taps at various places in the streets. There was also a smaller and much better supply for drinking purposes to be obtained from a smaller reservoir which was fed by a spring in Petworth Park, and known as the Conduit water, as distinguished from the first source, which was known as the river water. The Conduit supply was supposed to be for drinking, while the river supply was used for washing and other domestic purposes. The system was very unsatisfactory, as many would not take the trouble to fetch water from the Conduit but drank the river water, which was always more or less impure. The water supply is now of very good quality, and it is obtained from a spring in the Lower Greensand beds. Thence it is pumped into a reservoir near the Cottage Hospital, whence a main brings it into, and pipes distribute it throughout, the town. There seems to be at times a considerable loss through leakage, and the Parochial Committee, which has now been formed, will no doubt take steps to remedy this. The main pipe from the reservoir to the town passes down one steep hill, and then up another one, so that the pressure in the valley is very great, and leakage has occasionally occurred here to a large extent. When the reservoir was first made it was not covered over, so that seeds blew in and vegetation followed. Sometimes the vegetation was carried down the main into the supply pipes and caused them to become blocked. This was cured some years ago by covering over the reservoir, whereby all dust and seeds were kept out, and the supply was rendered purer and cooler.

In the rest of the district the people depend on deep or shallow wells, or dipping holes, springs, or rain water tanks. In many outlying places in the Weald the people prefer dipping holes to any other source, but they are very liable to fail in dry weather. Such water is preferred because it is generally softer and much

less brackish than that obtained from wells. It is generally of good quality, but it is often turbid or of a blueish tint from holding very finely divided clay in suspension. Filters are not used, but most cottagers boil all the water before it is used for drinking purposes.

Where one well supplies several houses, it is a common practice to have one large galvanized iron pail attached permanently to the windlass, and then each person fills his pail from the attached one. This is a good plan, as it ensures that no water can be drawn in a dirty bucket. Except in dry seasons, the district is fairly supplied with good water. Only two new wells were sunk during the year, as very few houses are erected now, the population being either stationary or declining. Constant care has to be exercised in looking after the kerbing and surroundings of the wells, to see if they are kept in good repair and to prevent surface water flowing in during wet weather.

DRAINAGE AND SEWAGE.

Petworth has greatly improved in recent years. A main system of sewerage works and sewage disposal was carried out in 1880, and as soon as the waterworks were completed in 1882-83, the house connections were made in 1884.

Nearly all the closets were at once done away with, and outdoor closets, with proper pans and flushing cisterns, were substituted. There was at once a great improvement in the sanitary surroundings of the houses. As the town is situated on the saddle of a hill there are two outfalls, one for the north side, and one for the south side.

In the rest of the district, there is no main system, nor indeed is any required, as there is no large populous place, and the houses are for the most part very much scattered about. The usual plan is to build a closet in the garden a short distance from the house, provided at the side or back with a small covered cesspool, into which earth or ashes can be thrown. This must be frequently emptied, as the receptacle is small; rain and sunlight cannot enter, while plenty of air is allowed to pass through. In former times, the closet often was placed over a ditch, and being open at the back, large accumulations of filth were often seen, and in times of heavy rain this foul matter washed away down the ditches into some neighbouring stream, whereby much pollution would result.

In a very few cases, as in some farm houses, water closets are in use, but they generally prove to be a nuisance as the quantity of

liquid to be dealt with is thereby greatly increased, and the flushing arrangements are generally faulty. They should be discouraged or forbidden. In country places the object is to minimise as far as possible the matter to be dealt with, to keep it dry and in a small compass, and to utilise it on the soil.

SCAVENGING AND CLEANSING.

I advised the Authority to carry out the provisions provided for by sec. 42 of the Public Health Act, 1875, for scavenging the town of Petworth. There are many small back yards and places where house refuse and rubbish accumulate, and where its removal cannot properly be carried out. If each occupier would place such refuse in a box or tub outside his house at a certain hour on a given day, once a week, a contractor or collector could come round and remove it with ease and regularity. This would much improve the sanitary surroundings of some of the smaller houses. The Authority agreed to this, and a Parochial Committee was appointed to carry out this and other matters, but nothing practical had been done up to the end of the year.

In the rest of the district each occupier could easily arrange to have his house refuse utilised on the land without much trouble.

The following list is a summary of the sanitary inspector's work during the year:—

| | | | | |
|---|-----|-----|---------------|------|
| No. of Houses visited | ... | ... | ... | 215 |
| No. of Nuisances reported | ... | ... | ... | 150 |
| No. of Nuisances abated | ... | ... | ... | 150 |
| No. of Notices served | ... | ... | ... | 50 |
| Houses reported as unfit for human habitation | | | | none |
| Houses cleansed and disinfected | ... | ... | | 25 |
| Houses cleansed and limewashed | ... | ... | | 30 |
| Cases of overcrowding reported... | ... | ... | | none |
| Cases of overcrowding abated | ... | ... | | none |
| New closets erected | ... | ... | ... | 10 |
| Old closets converted | ... | ... | ... | 25 |
| Earth closets made | ... | ... | ... | none |
| Wells sunk | ... | ... | ... | 2 |
| Wells cleansed | ... | ... | ... | 10 |
| Unwholesome food seized | ... | ... | ... | none |
| Samples of water collected for analysis... | ... | ... | | 15 |
| Samples of water found polluted | ... | ... | | 5 |
| No. of infectious cases removed to Flathurst | | | | |
| Cottage Hospital | ... | ... | ... | 4 |
| Nature of such infectious illness | ... | | scarlet fever | |

MARGARINE ACT.

Very little margarine is sold here by the grocers, and where it can be obtained the regulations of the Act have been complied with. There seems to be no demand for this substance on the part of the scattered agricultural population.

BAKEHOUSES.

These have been often inspected, and they have been well kept. There is no bakehouse on a large scale, and the chief duty is to see that they are frequently cleansed and limewashed. In each case there is a good amount of light and air, and in no case is there any drain within the building.

COWSHEDS AND DAIRIES.

These are in most cases very well kept, care being taken that there is an ample supply of good water, plenty of light and ventilation, frequent removal of refuse and cleansing of the walls and floors.

SLAUGHTERHOUSES.

These are very well kept as regards cleanliness and removal of refuse. In many instances animals are only killed once or twice a week, so that there is no difficulty in keeping them clean and tidy. Each slaughterhouse is often limewashed, and the blood is generally removed at once for use in a garden.

No proceedings were taken before the Magistrates during the year.

There is one common lodging house in the district and this has been kept clean.

No cases occurred in which it was necessary to condemn meat or any other article of food.

RAINFALL.

The amount of rainfall during the year was taken daily by the Rev. C. Holland, Petworth Rectory, who has kindly allowed me to use his tables :—

| Month. | Total depth in inches. | No. of rainy days. | Rainfall in 1891. |
|-----------------|---------------------------|-----------------------|----------------------|
| January | 1'04 | 10 | 4'15 |
| February | 1'29 | 12 | 0'02 |
| March | 1'54 | 6 | 2'87 |
| April | 1'04 | 9 | 1'12 |
| May | 1'30 | 7 | 2'59 |
| June | 2'76 | 12 | 1'71 |
| July | 2'83 | 12 | 2'29 |
| August | 3'48 | 15 | 7'86 |
| September | 3'76 | 10 | 1'07 |
| October | 5'40 | 17 | 8'62 |
| November | 4'42 | 16 | 4'56 |
| December | 2'16 | 9 | 5'29 |
| Total | 31'02 | 135 | 42'15 |

INQUESTS were held in six cases:—Female, 41 years, liver disease ; male, 22 hours, convulsions ; male, 20 years, accidental fall ; female, 36 years, found drowned ; female, 90 years, accidental fall ; female, 1 day, accidentally suffocated in bed.

There was one death returned as “not certified” out of a total of 163 deaths:—Male, 65 years, heart disease.

PETWORTH RURAL SANITARY DISTRICT.

TABLE 1.—Showing the Deaths at various groups of ages in the ten years, 1883-92.

| Year. | At all Ages. | Under 1 Year. | 1 to 5. | 5 to 15. | 15 to 25. | 25 to 60. | 60 and over. |
|-------------|--------------|---------------|---------|----------|-----------|-----------|--------------|
| 1883..... | 171 | 25 | 13 | 6 | 6 | 41 | 80 |
| 1884..... | 140 | 19 | 10 | 8 | 8 | 29 | 66 |
| 1885..... | 155 | 20 | 16 | 5 | 8 | 34 | 72 |
| 1886..... | 202 | 27 | 18 | 9 | 9 | 46 | 93 |
| 1887..... | 131 | 16 | 8 | 6 | 9 | 29 | 63 |
| 1888..... | 143 | 21 | 10 | 7 | 7 | 30 | 68 |
| 1889..... | 142 | 24 | 7 | 7 | 7 | 37 | 60 |
| 1890..... | 136 | 14 | 4 | 3 | 7 | 32 | 76 |
| 1891..... | 153 | 30 | 17 | 8 | 7 | 21 | 70 |
| 1892.. | 163 | 18 | 7 | 6 | 4 | 42 | 86 |
| Total | 1536 | 214 | 110 | 65 | 72 | 341 | 734 |

PETWORTH RURAL SANITARY DISTRICT.

TABLE 2.—Showing the Deaths and Death-rate in each of the ten years, 1883-92, from Zymotic Diseases.

| YEAR. | Small Pox. | Measles. | Scarlatina. | Diphtheria. | Whoop-cough. | Con. Fevers. | | | Diarrhoea and Dysentery. | Rheumatic Fever. | Erysipelas. | Pyæmia. | Puerperal Fever. | TOTAL. | Rate per 1000 persons living. |
|-------|------------|----------|-------------|-------------|--------------|--------------|----------|--------|--------------------------|------------------|-------------|---------|------------------|--------|-------------------------------|
| | | | | | | Typhus. | Enteric. | Other. | | | | | | | |
| 1883 | ... | ... | 1 | ... | 1 | ... | 2 | ... | 2 | 1 | 2 | ... | ... | 9 | 0·9 |
| 1884 | ... | ... | ... | 2 | 1 | ... | ... | ... | ... | ... | ... | 2 | ... | 5 | 0·5 |
| 1885 | ... | ... | ... | 4 | 2 | ... | 2 | ... | 1 | ... | 1 | ... | ... | 10 | 1·0 |
| 1886 | ... | 2 | 1 | 4 | 5 | ... | 4 | ... | 1 | ... | 1 | ... | ... | 18 | 1·8 |
| 1887 | ... | ... | 1 | 1 | ... | ... | ... | ... | 2 | ... | ... | ... | ... | 4 | 0·4 |
| 1888 | ... | ... | ... | 7 | 2 | ... | 1 | ... | 1 | ... | 1 | ... | ... | 12 | 1·2 |
| 1889 | ... | 2 | ... | 2 | 1 | ... | 1 | ... | 1 | ... | ... | ... | ... | 7 | 0·7 |
| 1890 | ... | ... | ... | ... | ... | ... | 1 | ... | 1 | ... | ... | ... | ... | 2 | 0·2 |
| 1891 | ... | ... | ... | 2 | 8 | ... | ... | ... | ... | ... | ... | ... | ... | 10 | 1·0 |
| 1892 | ... | ... | ... | 4 | 3 | ... | ... | ... | ... | ... | ... | ... | ... | 7 | 0·7 |
| Tl. | ... | 4 | 3 | 26 | 23 | — | 11 | — | 9 | 1 | 5 | 2 | — | 84 | 0·8 |

(A)—Table of DEATHS during the Year 1892, in the Rural Sanitary

| Names of Localities adopted for the purpose of these Statistics; Public Institutions being shown as separate localities. (a) | MORTALITY FROM ALL CAUSES, AT SUBJOINED AGES. | | | | | | | (i) | 1 | 2 | 3 |
|---|--|----------------------|-----------------------|------------------------|-------------------------|-------------------------|------------------------|--------------------------------|-----------------|------------------|------------------|
| | At all ages. (b) | Under 1 year. (c) | 1 and under 5. (d) | 5 and under 15. (e) | 15 and under 25. (f) | 25 and under 65. (g) | 65 and upwards. (h) | | Small Pox. I | Scarlatina. 2 | Diphtheria. 3 |
| North sub-district | 63 | 10 | 3 | 1 | 1 | 23 | 25 | Under 5 5 upwards. | | | |
| Petworth Parish | 51 | 5 | 2 | — | 2 | 21 | 21 | Under 5 5 upwards. | | | |
| Rest of South sub-district ... | 39 | 3 | 2 | 5 | — | 7 | 22 | Under 5 5 upwards. | | | 4 |
| Petworth Workhouse | 3 | — | — | — | — | 2 | 1 | Under 5 5 upwards. | | | |
| Wisborough Green Workhouse | 5 | — | — | — | — | 1 | 4 | Under 5 5 upwards. | | | |
| Petworth Cottage Hospital... | 2 | — | — | — | 1 | 1 | — | Under 5 5 upwards. | | | |
| | | | | | | | | Under 5 5 upwards. | | | |
| | | | | | | | | Under 5 5 upwards. | | | |
| | | | | | | | | Under 5 5 upwards. | | | |
| | | | | | | | | Under 5 5 upwards. | | | |
| TOTALS | 163 | 18 | 7 | 6 | 4 | 55 | 73 | Under 5 5 upwards. | | | 4 |
| The subjoined numbers have also to be taken into | | | | | | | | | | | |
| Deaths occurring outside the District among persons belonging thereto..... | — | — | — | — | — | — | — | Under 5 5 upwards. | | | |
| Deaths occurring within the District among persons not belonging thereto..... | — | — | — | — | — | — | — | Under 5 5 upwards. | | | |

(B)—Table of POPULATION, BIRTHS, AND OF NEW CASES OF
of Health, during the year 1892, in the Rural Sanitary District of

| Names of Localities adopted for the purpose of these Statistics; Public Institutions being shown as separate localities. (a) | POPULATION AT ALL AGES. | | Registered Births. (d) | Aged under 5 or over 5. (e) | NEW CASES OF COMING TO THE KNOW- OF | | | | |
|---|----------------------------|---|-------------------------------|--|---|----------------------|----------------------|-------------------------------|------------------|
| | Census 1891. (b) | Esti- mated to mid- dle of 1892. (c) | | | 1 Small Pox. | 2 Scarlatina. | 3 Diphtheria. | 4 Membranous Group. | 5 Typhus. |
| North sub-district | 3983 | 3980 | 95 | Under 5 5 upwards. | | 2 | 11 | | |
| Petworth Parish | 2831 | 2825 | 67 | Under 5 5 upwards. | | 2 4 | | 1 | |
| Rest of South sub-district | 2545 | 2545 | 51 | Under 5 5 upwards. | | 4 | 7 | | |
| Petworth Workhouse | 33 | 37 | 1 | Under 5 5 upwards. | | | | | |
| Wisborough Green Workhouse | 36 | 30 | | Under 5 5 upwards. | | | | | |
| Petworth Cottage Hospital..... | 3 | 3 | | Under 5 5 upwards. | | | | | |
| | | | | Under 5 5 upwards. | | | | | |
| | | | | Under 5 5 upwards. | | | | | |
| | | | | Under 5 5 upwards. | | | | | |
| | | | | Under 5 5 upwards. | | | | | |
| | | | | Under 5 5 upwards. | | | | | |
| TOTALS | 9431 | 9420 | 214 | Under 5 5 upwards. | | 2 10 | | 20 1 | |

INFECTIOUS SICKNESS, coming to the knowledge of the Medical Officer
ETWORTH; classified according to DISEASES, AGES, and LOCALITIES.

[illegible]

THAKEHAM
RURAL SANITARY DISTRICT.

pp. 63 et seq.

RURAL SANITARY DISTRICT OF THAKEHAM.

| | |
|--------------------------------|--------|
| POPULATION IN 1871 | 8,335 |
| " " 1881 | 8,285 |
| " " 1891 | 8,054 |
| AREA IN ACRES | 40,636 |
| NUMBER OF HOUSES IN 1871 | 1,705 |
| " " 1881 | 1,652 |
| " " 1891 | 1,610 |

POPULATION.

The census returns of 1891 show that the population has declined during the past decade, notwithstanding that the births are much in excess of the deaths in each year. This decline, as in the case of Petworth, follows upon a diminution in the previous intercensal period, so that there are fewer persons living now in the district than there were twenty years ago, and, in fact, the number now is nearly the same as it was in 1861.

The loss is rather more evident in the Pulborough than in the Washington sub-district, as will be seen on comparing the following figures :—

| | 1871. | 1881. | 1891. |
|-------------------------------|-------|-------|-------|
| Pulborough sub-district | 3979 | 3888 | 3746 |
| Washington sub-district | 4356 | 4397 | 4308 |
| | <hr/> | <hr/> | <hr/> |
| Total | 8335 | 8285 | 8054 |

BIRTHS AND BIRTH-RATE.

During the year 1892 the births of 185 children were registered; of these, 96 were male, and 89 were female.

Estimating the population in the middle of the year at 8,030 the birth-rate was equal to 23·0 per 1,000 persons living, a rate lower than that recorded in any previous year.

The births and birth-rate during the past ten years have been as follows :—

| Year. | Births. | | | Birth-rate. | Year. | Births. | | | Birth-rate. |
|-------|---------|-----|-----|-------------|-------|---------|-----|-----|-------------|
| 1883 | ... | 232 | ... | 28·0 | 1888 | ... | 230 | ... | 28·0 |
| 1884 | ... | 247 | ... | 29·9 | 1889 | ... | 232 | ... | 28·4 |
| 1885 | ... | 261 | ... | 31·6 | 1890 | ... | 210 | .. | 25·9 |
| 1886 | ... | 220 | ... | 26·6 | 1891 | ... | 223 | ... | 27·7 |
| 1887 | ... | 245 | ... | 29·7 | 1892 | ... | 185 | ... | 23·0 |

The mean number of births is 228, and the mean birth-rate is 27·9 per 1,000 of population.

In England and Wales the birth-rate during the year was 31·4 per 1,000 persons living, a rate 1·7 per 1,000 below the mean rate in the ten years 1882-91.

The following table shows the births and birth-rate in each locality during the past two years :—

| | Births. | | | Birth-rate. | |
|---------------------------------|---------|-------|-----|-------------|-------|
| | 1891. | 1892. | | 1891. | 1892. |
| Amberley Parish..... | 14 | 14 | ... | 26·6 | 27·0 |
| Pulborough Parish..... | 48 | 50 | ... | 26·1 | 27·9 |
| Rest of Pulborough sub-district | 33 | 29 | ... | 23·3 | 20·3 |
| Storrington Parish | 32 | 31 | ... | 24·7 | 24·4 |
| Washington Parish..... | 24 | 15 | ... | 28·6 | 17·8 |
| Rest of Washington sub-district | 72 | 46 | ... | 33·0 | 21·1 |
| Total..... | 223 | 185 | | 27·7 | 23·03 |

GENERAL MORTALITY.

There were 145 deaths registered in the district during the year 1892, but to this number must be added the death of one person in the Worthing Infirmary belonging to this area, making a total of 146.

There were thirteen deaths in the Thakeham Workhouse, and these have been distributed amongst the several parishes whence each inmate came, viz., Amberley 2, Pulborough 2, West Chiltington 1, Storrington 1, Thakeham 1, Ashington 2, Washington 1, Findon 3, in all 13.

There was one death in Worthing Infirmary belonging to Storrington.

Estimating the population in the middle of the year at 8,030, the death-rate was equal to 18·2 per 1,000 persons living, a rate which is much higher than usual.

In country places throughout England and Wales the mortality in 1892 was equal to 18·1 per 1,000 of population.

The variations in the death-rate during the past ten years have been as follows :—

| Year, | Deaths. | Death-rate, | Year. | Deaths. | Death-rate. |
|----------|---------|-------------|----------|---------|-------------|
| 1883 ... | 121 | 14·6 | 1888 ... | 106 | 12·9 |
| 1884 ... | 126 | 15·2 | 1889 ... | 127 | 15·5 |
| 1885 ... | 119 | 14·4 | 1890 ... | 101 | 12·4 |
| 1886 ... | 118 | 14·3 | 1891 ... | 126 | 15·6 |
| 1887 ... | 123 | 14·9 | 1892 ... | 146 | 18·2 |

Thus there have been during the above period 1,213 deaths, and a mean mortality of 14·8 per 1,000. During the same period there were 2,285 births, so that the natural increase of population by excess of births over deaths was 1,072. The census returns, however, show a *decrease* of 231 persons, so that a great many must have left this district during the past decade.

In each locality the deaths and death-rate for the past two years are here shown :—

| | Deaths. | | Death-rate. | |
|---------------------------------|---------|-------|-------------|-------|
| | 1891. | 1892. | 1891. | 1892. |
| Amberley Parish | 9 | 9 | 17·1 | 17·3 |
| Pulborough Parish | 35 | 42 | 19·5 | 23·5 |
| Rest of Pulborough sub-district | 22 | 34 | 15·3 | 23·8 |
| Storrington Parish | 17 | 15 | 13·1 | 11·8 |
| Washington Parish | 15 | 9 | 17·9 | 10·7 |
| Rest of Washington sub-district | 28 | 37 | 12·8 | 17·0 |
| Total..... | 126 | 146 | 15·6 | 18·2 |

In each parish the deaths were thus distributed :—

| | | | | |
|--------------------------|------|-----|----------------------|------|
| North Stoke | 1 | ... | Parham | 2 |
| Amberley | 9 | ... | Storrington | 15 |
| Rackham | 2 | ... | Sullington | 1 |
| Greatham | 3 | ... | Thakeham | 6 |
| Hardham | 5 | ... | Warminghurst | none |
| Cold Waltham | 9 | ... | Ashington | 5 |
| Wiggonholt | none | ... | Wiston | 5 |
| Pulborough | 42 | ... | Washington | 9 |
| West Chiltington | 14 | ... | Findon | 18 |
| Total | | ... | 146. | |

INFANT MORTALITY.

The *infant mortality* is here given as measured by the number of deaths under one year of age to the total number of births in the year :—

| | Deaths under Births, one year, | | Ratio to 1000 Births |
|---|-----------------------------------|-----|-------------------------|
| Amberley Parish | 14 | 1 | 71 |
| Pulborough Parish | 50 | 6 | 120 |
| Rest of Pulborough sub-district..... | 29 | 6 | 207 |
| Storrington Parish | 31 | 1 | 32 |
| Washington Parish..... | 15 | 0 | 0 |
| Rest of Washington sub-district | 46 | 2 | 43 |
| Total | | 185 | 16 |
| | | | 86 |

The 16 *Infantile* Deaths included three from whooping-cough, one from tuberculosis, one from heart disease, one from bronchitis, two from pneumonia, five from debility, and three from marasmus.

ZYMOTIC MORTALITY.

The deaths were 8 in number, of which two were among notifiable diseases, and 6 in the other class. The rate of mortality was therefore equal to 1·0 per 1000.

| | Cases. | Deaths. |
|-----------------------|-----------------|---------|
| Small-pox | none | none |
| Scarlatina | 2 | none |
| Diphtheria | 15 | 2 |
| Membranous Croup..... | none | none |
| Fever { | Typhus | none |
| | Enteric | none |
| | Continued..... | none |
| | Relapsing | none |
| | Puerperal | none |
| | Cholera..... | none |
| | Erysipelas..... | none |
| Total | 21 | 2 |

In the other class the deaths were as follows :—

| | Deaths. |
|------------------------------|---------|
| Measles | 1 |
| Whooping Cough | 3 |
| Diarrhœa and Dysentery | 1 |
| Rheumatic Fever | 1 |
| Total | 6 |

The prevalence in each quarter of each notifiable disease is shown in the following table :—

| | 1st Qr. | | 2nd Qr. | | 3rd Qr. | | 4th. Qr. | | Year | | Total |
|---------------------|---------|------|---------|------|---------|------|----------|------|-------|------|-------|
| | under | over | under | over | under | over | under | over | under | over | |
| Scarlatina | 5 | 2 | 5 | ... | 5 | ... | 5 | ... | 5 | 2 | 2 |
| Diphtheria | ... | 6 | ... | 8 | ... | 1 | ... | ... | ... | 15 | 15 |
| Enteric Fever | ... | ... | ... | ... | ... | ... | ... | 1 | ... | 1 | 1 |
| Erysipelas..... | ... | ... | ... | ... | ... | ... | ... | 3 | ... | 3 | 3 |
| Total..... | ... | 8 | ... | 8 | ... | 1 | ... | 4 | ... | 21 | 21 |

SCARLATINA was twice imported into the district, but on each occasion only one person was attacked, and there was no spread of the disease.

DIPHTHERIA appeared in eight houses. In two cases a clergyman and a medical man caught the disease from visiting an infected person, but no one else in these houses caught the disorder. In January a child from an infected cottage at Bury, which is in the Petworth District, was sent to Cold Waltham, and then it spread to two other cottages in the neighbouring parish of Greatham, where seven other children had the disease shortly afterwards.

In all of these cases the children from an infected house were kept from school, disinfectants were given, and each house was fumigated and cleansed.

INFLUENZA caused 20 deaths in 1892 against 4 in 1890, but the mortality from lung diseases was not so marked as in other districts on the cold clay soils. 19 out of the 20 deaths were amongst persons over 40 years of age. The general mortality in this quarter was much higher than usual, there being 57 deaths in 1892, against 40 and 37 in the corresponding period of 1890 and 1891. For the first time in the history of registration the death-rate in country places throughout England and Wales exceeded the same rate in urban districts.

WATER SUPPLY.

There is no public supply of water in this district, and the condition of the water supply is precisely the same as that detailed in my report for 1892. Very little building goes on in this area, but when a new house is built a water certificate is given, if there be a good and wholesome supply.

Five samples of water were sent for analysis, and they were all found to be fit for drinking purposes.

An attempt was made to give a public water supply to Storrington, but so much opposition was raised in the parish on the score of expense, that the idea had to be abandoned.

DRAINAGE AND SEWAGE.

It was proposed to drain Storrington village, but the idea was strongly opposed by the inhabitants on the ground of expense. At present many houses drain into old channels which were made to carry away surface or storm water, and there is much pollution of a small stream which runs through the place.

A good deal of useful work has been done all over the district, and especially at Pulborough and Storrington, in improving the closet accommodations and in removing container closets, in cleansing and limewashing dirty houses and in substituting gully traps for bell traps.

Earth closets are very seldom met with, as the people dislike them very much.

Four houses were closed during the year under the Housing of the Working Classes Act, 1890 ; two remain empty, while two have been put in good repair.

SCAVENGING AND CLEANSING.

Steps were taken during the year to make bye-laws for the prevention of nuisances, under section 44 of the Public Health Act, 1875, and to contract for the removal of house refuse and the cleansing of closets, ashpits, etc., under section 42 of the same act. At present it is sought to apply these powers to Storrington, and in a short time the other populous parishes of Pulborough and Amberley will probably be provided for in a similar manner.

PULBOROUGH.

There are 289 houses in the parish. The closet accommodation of 255 houses is the privy, with a closed unventilated cesspit. These privies are situated at a distance of 8ft. to 60 feet from the house, while a few are built on the external wall of the dwelling.

Four houses have earth closets, which are well kept, as the occupiers use plenty of dry earth, and remove the contents frequently. Twenty-two houses are provided with water closets, 10 of which are of the pattern known as a pan and container closet, fitted with a D-trap, this class of closet is always defective, as there is a large filth collecting surface, which cannot be properly flushed or kept clean. Four houses are provided with valve closets, 1 with Jennings's trapless basin, 2 with wash-out pans and traps, supplied with water by small flushing cisterns. These closets are fixed inside the houses. There are seven outside W.C's., 3 with short hopper pans, 2 with long hopper pans, and 2 with washout basins and traps. In one house the soil pipe is inside, and it is ventilated by a 1-inch pipe ; at nine houses the soil pipes are fixed outside, of which three are ventilated by two-inch pipes, and 6 are not ventilated at all. At nine houses there are sink inlets inside the dwellings, in five of these bell traps were found, in two there were gully traps, and in two there were no traps at all. In each case a good stoneware gulley trap should be provided and it should always be placed outside the dwelling, while the sink pipe should pass through the outer wall so as to deliver in the open air. Bell traps ought never to be used. There are six cases of insufficient closet accommodation. Some of the cottage property is very dirty and dilapidated. 94 houses were found to be more or less in want of repair ; the walls were dirty, the ceilings often broken, the roofs leaky, floors rotten, and in some cases the stairs were in an unsafe condition. Four houses were so bad that they were unfit for human habitation.

THE WATER SUPPLY is derived from wells varying from 5 ft. to 170 ft. in depth, and some of the properties are supplied from springs. 18 houses have their supply from wells yielding water of doubtful quality, and at 10 houses the supply is insufficient. 3 houses obtain their supply of water from a source to which they have no right, and the other houses have a good supply, although frequently the water is found to contain iron. The kerbing and cover to 45 wells are in a broken and rotten state ; at 39 houses, the kerbing to the wells is either level with or below the surface of the surrounding ground, so that surface water may flow in during wet weather.

SYSTEMATIC INSPECTION.

The following summary shows the sanitary work done in other parts of the district :—

| | | | | | |
|--|-----|-----|-----|-----|----|
| Nuisances reported | ... | ... | ... | ... | 50 |
| Nuisances abated without notice | ... | ... | ... | ... | 38 |
| Houses reported as unfit for habitation | ... | ... | ... | ... | 2 |
| Houses closed | ... | ... | ... | ... | 2 |
| Houses cleansed and disinfected | ... | ... | ... | ... | 26 |
| Cases of overcrowding | ... | ... | ... | ... | 3 |
| Cases of overcrowding abated | ... | ... | ... | ... | 2 |
| Wells sunk for improved supply | ... | ... | ... | ... | 2 |
| Wells cleansed | ... | ... | ... | ... | 2 |
| Water certificates granted for new houses | ... | ... | ... | ... | 1 |
| Old closets converted into earth closets | ... | ... | ... | ... | 6 |
| Old closets converted into pail system | ... | ... | ... | ... | 4 |
| New closets erected | ... | ... | ... | ... | 4 |
| Old container and long hoppers converted into washouts | ... | ... | ... | ... | 8 |

In Storrington the Contractor collects the ashes and empties all earth closets once a week on Saturday mornings. During the 5 months he has emptied and removed the ashes from 14 ashpits and emptied 85 pails and 38 vaults and cesspits.

INQUESTS were held in 9 cases:—Female, 2 months, inflammation of the lungs ; male, 3 years, accidentally drowned ; male, 21 years, accidentally drowned ; female, 22 years, accidentally drowned ; male, 28 years, suicide by drowning ; male, 9 years, accidentally killed on the railway ; male, 13 years, accidentally killed on the railway ; male, 7 weeks, marasmus ; male, 63 years, suicide by drinking carbolic acid.

There was one death returned as not certified out of a total of 146 deaths :—Male, 51 years, consumption.

COWSHEDS AND DAIRIES.

These are kept very well and they are provided with plenty of light, ventilation, and good water.

SLAUGHTER HOUSES.

The 12 slaughterhouses are kept in fair condition. I would also recommend you to adopt for the whole district sections 169 and 170 of the Public Health Act, which empowers you to make bye-laws for the regulation of slaughter houses.

COMMON LODGING HOUSES.

There is no registered common lodging house in this district.

No proceedings were taken before the Magistrates during the year.

BAKEHOUSES.

The bakehouses have been inspected and are in a clean condition.

THAKEHAM RURAL SANITARY DISTRICT.

TABLE 1.—Showing the Deaths at various groups of ages in the ten years, 1883-92.

| Year. | At all Ages. | Under 1 Year. | 1 to 5. | 5 to 15. | 15 to 25. | 25 to 60. | 60 and over. |
|-------------|--------------|---------------|---------|----------|-----------|-----------|--------------|
| 1883..... | 121 | 19 | 11 | 3 | 7 | 32 | 49 |
| 1884..... | 126 | 17 | 12 | 9 | 5 | 31 | 52 |
| 1885..... | 119 | 21 | 13 | 8 | 5 | 28 | 44 |
| 1886..... | 118 | 18 | 9 | 2 | 6 | 32 | 51 |
| 1887..... | 123 | 19 | 13 | 6 | 6 | 26 | 53 |
| 1888..... | 106 | 17 | 8 | 3 | 4 | 24 | 50 |
| 1889..... | 127 | 19 | 22 | 9 | 7 | 24 | 46 |
| 1890..... | 101 | 12 | 4 | 3 | 5 | 26 | 51 |
| 1891..... | 126 | 25 | 6 | 5 | 6 | 27 | 57 |
| 1892..... | 146 | 16 | 7 | 6 | 5 | 34 | 78 |
| Total | 1213 | 183 | 105 | 54 | 56 | 284 | 531 |

TABLE 2.—Showing the Deaths and Death-rate in each of the ten years, 1883-92, from Zymotic Diseases.

| YEAR. | Small Pox. | Measles. | Scarlatina. | Diphtheria. | Whoop-cough. | Con. Fevers. | | | Diarrhoea and Dysentery. | Rheumatic Fever. | Erysipelas. | Pyæmia. | Puerperal Fever. | TOTAL. | Rate per 1000 persons living. |
|-------|------------|----------|-------------|-------------|--------------|--------------|----------|--------|--------------------------|------------------|-------------|---------|------------------|--------|-------------------------------|
| | | | | | | Typhus. | Enteric. | Other. | | | | | | | |
| 1883 | ... | ... | 1 | 2 | ... | ... | 2 | ... | 2 | ... | ... | ... | ... | 7 | 0·8 |
| 1884 | ... | ... | 1 | 1 | 3 | 1 | 1 | ... | ... | ... | 3 | ... | 2 | 12 | 1·4 |
| 1885 | ... | ... | 3 | 5 | 2 | ... | ... | ... | 2 | ... | 2 | ... | ... | 14 | 1·7 |
| 1886 | 1 | ... | 2 | ... | 6 | ... | 1 | ... | 2 | ... | 1 | ... | 3 | 16 | 1·9 |
| 1887 | ... | ... | 1 | 4 | 1 | ... | 4 | ... | 2 | ... | 1 | ... | ... | 13 | 1·5 |
| 1888 | ... | ... | 1 | ... | 2 | ... | ... | ... | 3 | ... | ... | ... | 1 | 7 | 0·8 |
| 1889 | ... | 2 | 1 | 12 | 5 | ... | ... | ... | 1 | ... | 2 | ... | ... | 23 | 2·8 |
| 1890 | ... | 1 | ... | ... | ... | ... | 1 | ... | 1 | ... | ... | ... | ... | 3 | 0·3 |
| 1891 | ... | ... | 1 | 2 | ... | ... | 1 | ... | 2 | 1 | ... | ... | ... | 7 | 0·8 |
| 1892 | ... | 1 | ... | 2 | 3 | ... | ... | ... | 1 | 1 | ... | ... | ... | 8 | 1·0 |
| Tl. | 1 | 4 | 11 | 28 | 22 | 1 | 10 | — | 16 | 2 | 9 | — | 6 | 110 | 1·4 |

(A)—Table of DEATHS during the Year 1892, in the Rural Sanitary

| Names of Localities adopted for the purpose of these Statistics; Public Institutions being shown as separate localities. (a) | MORTALITY FROM ALL CAUSES, AT SUBJOINED AGES. | | | | | | | (i) | 1 | 2 | 3 |
|---|--|----------------------|-----------------------|------------------------|-------------------------|-------------------------|------------------------|-----------------------|-------------------|--------------------|--------------------|
| | At all ages. (b) | Under 1 year. (c) | 1 and under 5. (d) | 5 and under 15. (e) | 15 and under 25. (f) | 25 and under 65. (g) | 65 and upwards. (h) | | Small Pox. (i) | Scarlatina. (j) | Diphtheria. (k) |
| Amberley Parish | 7 | 1 | — | 1 | — | 3 | 2 | Under 5 5 upwards. | | | |
| Pulborough Parish..... | 40 | 6 | 1 | 2 | — | 13 | 18 | Under 5 5 upwards. | | | |
| Rest of Pulborough sub-district | 33 | 6 | 1 | 2 | 4 | 10 | 10 | Under 5 5 upwards. | | | 2 |
| Storrington Parish..... | 13 | 1 | — | — | 1 | 8 | 3 | Under 5 5 upwards. | | | |
| Washington Parish | 8 | — | 1 | — | — | 3 | 4 | Under 5 5 upwards. | | | |
| Rest of Washington sub-district | 31 | 2 | 4 | 1 | — | 10 | 14 | Under 5 5 upwards. | | | |
| Thakeham Workhouse..... | 13 | — | — | — | — | 3 | 10 | Under 5 5 upwards. | | | |
| | | | | | | | | Under 5 5 upwards. | | | |
| | | | | | | | | Under 5 5 upwards. | | | |
| | | | | | | | | Under 5 5 upwards. | | | |
| TOTALS | 145 | 16 | 7 | 6 | 5 | 50 | 61 | Under 5 5 upwards. | | | 2 |
| The subjoined numbers have also to be taken into | | | | | | | | | | | |
| Deaths occurring outside the District among persons belonging thereto..... | 1 | — | — | — | — | 1 | — | Under 5 5 upwards. | | | |
| Deaths occurring within the District among persons not belonging thereto..... | — | — | — | — | — | — | — | Under 5 5 upwards. | | | |

District of THAKEHAM, classified according to Diseases, Ages, and Localities.

MORTALITY FROM SUBJOINED CAUSES, DISTINGUISHING DEATHS OF CHILDREN
UNDER FIVE YEARS OF AGE.

| 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 |
|-------------------|---------|---------------------|------------|------------|------------|----------|-------------|----------|-----------------|--------------------------|------------------|-------|-----------|----------------------------------|----------------|-----------|---------------------|---------|
| Membranous Group. | FEVERS. | | | | | Cholera. | Erysipelas. | Measles. | Whooping Cough. | Diarrhoea and Dysentery. | Rheumatic Fever. | Ague. | Phthisis. | Bronchitis, Pneumonia, Pleurisy. | Heart Disease. | Injuries. | All other Diseases. | TOTALS. |
| | Typhus. | Enteric or Typhoid. | Continued. | Relapsing. | Puerperal. | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | 1 | 1 |
| | | | | | | | | | | | | | 1 | 1 | | 1 | 3 | 6 |
| | | | | | | | | | 1 | | | | | 2 | | | 4 | 7 |
| | | | | | | | | 1 | | | 1 | | 2 | 3 | 5 | 1 | 20 | 33 |
| | | | | | | | | | 2 | | | | | 1 | | 1 | 3 | 7 |
| | | | | | | | | | | | | | 2 | 6 | 3 | 3 | 10 | 26 |
| | | | | | | | | | | | | | | 1 | | | | 1 |
| | | | | | | | | | | | | | | 1 | 2 | | 9 | 12 |
| | | | | | | | | | | | | | | | | | 1 | 1 |
| | | | | | | | | | | | | | | 1 | 1 | | 5 | 7 |
| | | | | | | | | | | 1 | | | | | 1 | | 4 | 6 |
| | | | | | | | | | | | | | 2 | 1 | | 1 | 21 | 25 |
| | | | | | | | | | | | | | | 2 | 2 | | 9 | 13 |
| | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | 3 | 1 | | | | 4 | 1 | 1 | 13 | 23 |
| | | | | | | | | 1 | | | 1 | | 7 | 15 | 13 | 6 | 77 | 122 |

account in judging of the above records of mortality.

[illegible]

(B)—Table of POPULATION, BIRTHS, AND OF NEW CASES OF
of Health, during the year 1892, in the Rural Sanitary District of

| Names of Localities adopted for the purpose of these Statistics; Public Institutions being shown as separate localities. | POPULATION AT ALL AGES. | | Registered Births. | Aged under 5 or over 5. | NEW CASES OF COMING TO THE KNOW- OF | | | | |
|--|----------------------------|--|--------------------|-------------------------------|---|-------------|-------------|----------------------|---------|
| | Census 1891. | Esti- mated to mid- dle of 1892. | | | 1 | 2 | 3 | 4 | 5 |
| (a) | (b) | (c) | (d) | (e) | Small Pox. | Scarlatina. | Diphtheria. | Membranous Group. | Typhus. |
| Amberley Parish | 525 | 520 | 14 | Under 5 5 upwards. | | 2 | | | |
| Pulborough Parish | 1787 | 1790 | 50 | Under 5 5 upwards. | | | 1 | | |
| Rest of Pulborough sub-district | 1434 | 1430 | 29 | Under 5 5 upwards. | | | 11 | | |
| Storrington Parish..... | 1293 | 1270 | 31 | Under 5 5 upwards. | | | | | |
| Washington Parish | 838 | 840 | 15 | Under 5 5 upwards. | | | | | |
| Rest of Washington sub-district | 2099 | 2120 | 43 | Under 5 5 upwards. | | | 3 | | |
| Thakeham Workhouse | 78 | 60 | 3 | Under 5 5 upwards. | | | | | |
| | | | | Under 5 5 upwards. | | | | | |
| | | | | Under 5 5 upwards. | | | | | |
| | | | | Under 5 5 upwards. | | | | | |
| | | | | Under 5 5 upwards. | | | | | |
| TOTALS | 8054 | 8030 | 185 | Under 5 5 upwards. | | 2 | 15 | | |

INFECTIOUS SICKNESS, coming to the knowledge of the Medical Officer
HAKKHAM; classified according to DISEASES, AGES, and LOCALITIES.

[illegible]

EAST PRESTON
RURAL SANITARY DISTRICT.

pp. 79 et seq.

RURAL SANITARY DISTRICT OF EAST PRESTON.

| | |
|--------------------------------|--------|
| POPULATION IN 1871 | 7,680 |
| " " 1881 | 8,025 |
| " " 1891 | 8,761 |
| AREA IN ACRES | 30,696 |
| NUMBER OF HOUSES IN 1871 | 1,467 |
| " " 1881 | 1,662 |
| " " 1891 | 1,846 |

POPULATION.

There have been several changes in the arrangement of the parishes during the last twenty years. In 1876 a portion of the rural parish of Broadwater, containing about 600 people, dwelling on 200 acres of land, was added to the Urban Sanitary District of Worthing.

In October, 1883, Angmering (North), with 28 houses and 130 persons, and Lyminster (North), with 85 houses and 413 persons, were transferred from Littlehampton to the Arundel sub-district. In November, 1890, the rural portion of Heene, with 30 houses and 150 persons, was merged in the Borough of Worthing. In spite of the loss of 756 persons by alteration of area, and thus adding to the population of Worthing, the numbers have increased at each census period.

In each sub-district the various changes are here shown :

| | 1871. | 1881. | 1891. |
|--------------------------------|-------|-------|-------|
| Worthing sub-district | 3177 | 2910 | 3341 |
| Littlehampton sub-district ... | 3163 | 3753 | 3437 |
| Arundel sub-district..... | 1340 | 1362 | 1983 |
| | <hr/> | <hr/> | <hr/> |
| Total | 7680 | 8025 | 8761 |

Of the parishes in this district, one has been transferred ; ten show an increase over 1881 of 786 persons, viz. : —Broadwater, West Tarring, Lyminster, and Tortington ; ten smaller parishes show a stationary or decreasing population.

BIRTHS AND BIRTH-RATE.

During the year 1892 the births of 204 children were registered; of these, 109 were male, and 95 were female.

Estimating the population in the middle of the year at 8,750 the birth-rate was equal to 23·3 per 1,000 persons living.

The births and birth-rate in the district during the past ten years have been as follows :—

| Year. | Births. | Birth-rate. | Year. | Births. | Birth-rate. |
|----------|---------|-------------|----------|---------|-------------|
| 1883 ... | 262 ... | 31·4 | 1888 ... | 226 ... | 26·2 |
| 1884 ... | 247 ... | 29·5 | 1889 ... | 230 ... | 26·5 |
| 1885 ... | 234 ... | 27·5 | 1890 ... | 204 .. | 23·4 |
| 1886 ... | 246 ... | 28·8 | 1891 ... | 244 ... | 28·0 |
| 1887 ... | 241 ... | 28·1 | 1892 ... | 204 ... | 23·3 |

The mean number of births is 234, and the mean birth-rate is 27·3 per 1,000 of population.

In England and Wales the birth-rate during the year was 30·5 per 1,000 persons living, a rate 1·7 per 1,000 below the mean rate in the ten years 1882-91.

The following table shows the births and birth-rate in each locality during the past two years :—

| | Births. | | | Birth-rate. | |
|----------------------------------|---------|-------|-----|-------------|-------|
| | 1891. | 1892. | | 1891. | 1892. |
| Worthing sub-district | 93 | 81 | ... | 28·5 | 24·5 |
| Littlehampton sub-district | 110 | 83 | ... | 31·7 | 24·0 |
| Arundel sub-district | 41 | 40 | ... | 20·7 | 20·0 |
| Total..... | 224 | 204 | | 28·0 | 23·3 |

The birth-rate which has been steadily declining since 1882, reached its lowest point during the past year.

GENERAL MORTALITY.

There were 160 deaths registered in this district during the year 1892; but from this number must be deducted the deaths of 17 persons belonging to urban areas outside this district. These 17 persons died in East Preston Workhouse, of whom 10 came from Worthing, 6 from Littlehampton, and 1 from Arundel. There were also 13 other deaths in the Workhouse, and these have been distributed among the several parishes whence each inmate came, viz., Broadwater, 3; West Tarring, 1; Durrington, 1; Angmering, 2; Lyminster, 2; Climping, 1; Tortington, 1; Poling, 1; Patching, 1; in all 13.

Estimating the population in the middle of the year at 8,750, the death-rate was equal to 16·3 per 1,000 persons living.

In country districts throughout England and Wales the rate of mortality in 1892 was 18·5 per 1,000 of population.

The variations in the death-rate during the past ten years have been as follows :—

| Year, | Deaths. | Death-rate, | Year, | Deaths. | Death-rate, |
|----------|---------|-------------|----------|---------|-------------|
| 1883 ... | 130 | 15·6 | 1888 ... | 108 | 12·5 |
| 1884 ... | 116 | 13·9 | 1889 ... | 116 | 13·4 |
| 1885 ... | 132 | 15·5 | 1890 ... | 122 | 14·0 |
| 1886 ... | 106 | 12·4 | 1891 ... | 123 | 14·1 |
| 1887 ... | 114 | 13·3 | 1892 ... | 143 | 16·3 |

The mean number of deaths is 121, and the mean death-rate is 14·1 per 1000. During this decade there were 2338 births, so the natural increase of population by excess of births over deaths was 1,128, the births being more than twice the number of deaths.

The actual increase was 886, but as Heene with its 150 people was transferred to Worthing, the real increase was 736; there is however, a discrepancy of 50 in the published returns.

The following table shows the deaths and death-rate in each locality during the past two years :—

| | Deaths. | | | Death-rate. | |
|---------------------------------|---------|-------|-----|-------------|-------|
| | 1891 | 1892. | | 1891 | 1892. |
| Worthing sub-district | 50 | 65 | ... | 15·3 | 19·7 |
| Littlehampton sub-district..... | 49 | 41 | ... | 14·1 | 11·9 |
| Arundel sub-district | 24 | 37 | ... | 12·1 | 18·5 |
| Total | 123 | 143 | | 14·1 | 16·3 |

In each parish the deaths were thus distributed :—

| | | | | |
|-----------------------|------|------|----------------------|---|
| Broadwater | 18 | ... | Climping | 6 |
| West Tarring | 26 | ... | Ford | 4 |
| Clapham | 2 | ... | Tortington..... | 6 |
| Durrington | 1 | ... | Poling | 6 |
| Goring | 14 | ... | Patching | 3 |
| Ferring | 4 | ... | Angmering (north) | 2 |
| Kingston | none | ... | Warningcamp..... | 1 |
| East Preston | 3 | ... | Lyminster (north)... | 8 |
| Angmering (south) ... | 10 | ... | Burpham | 5 |
| Lyminster (south) ... | 15 | ... | South Stoke | 3 |
| Rustington | 3 | ... | Houghton | 3 |
| Total | ... | 143. | | |

INFANT MORTALITY.

The *infant mortality* is here given as measured by the number of deaths under one year of age to the total number of births in the year :—

| | Births | Deaths under one year | Ratio to 1000 Births | Ratio 1890 | Ratio 1889 |
|-----------------------------|--------|--------------------------|-------------------------|---------------|---------------|
| Worthing sub-district | 81 | 9 | 111 | 112 | 12 |
| Littlehampton sub-district | 83 | 4 | 48 | 76 | 135 |
| Arundel sub-district | 40 | 7 | 175 | 66 | 117 |
| | <hr/> | <hr/> | <hr/> | <hr/> | <hr/> |
| Total..... | 204 | 20 | 93 | 88 | 88 |

In England and Wales the proportion of deaths under one year of age to registered births was 148 per 1,000 during the past year, the mean proportion in the preceding ten years having been 144.

The nineteen infantile deaths include one from whooping-cough, one from diarrœa, two from tuberculosis, three from convulsions, one from heart disease, two from bronchitis, and four from debility ; five infants were born prematurely.

ZYMOTIC MORTALITY.

There were four deaths from zymotic disease in the case of those which are notifiable, and there were two deaths in the other class where the number of cases cannot be obtained.

Adding the two classes together, there is a total of 6 deaths with a zymotic mortality of 1·14 per 1000.

| | Cases. | Deaths. |
|-----------------------|-----------------|---------|
| Small-pox | none | none |
| Scarlatina | 8 | none |
| Diphtheria | 12 | 2 |
| Membranous Croup..... | 1 | none |
| Fevers { | Typhus | none |
| | Enteric | 2 |
| | Continued..... | none |
| | Relapsing | none |
| | Puerperal | none |
| | Cholera..... | none |
| | Erysipelas..... | none |
| | <hr/> | <hr/> |
| Total | 54 | 4 |

The cases of scarlatina were very mild and no death resulted. The enteric fever cases all occurred in new houses and under peculiar conditions, which are detailed below. The effect of an intermittent supply in causing the decrease is given in detail in the report on Worthing, to which reference should be made.

In the other class the deaths were as follows :—

| | Deaths. |
|------------------------------|---------|
| Measles | none |
| Whooping Cough | 1 |
| Diarrhœa and Dysentery | 1 |
| Rheumatic Fever | none |
| Total | <hr/> 2 |

The Infectious Diseases (Notification) Act, 1889, came into operation in this district on March 1st, 1891, and on the same day the Infectious Disease (Prevention) Act, 1850, also took effect.

On March 21st, 1891, the Public Health Acts Amendment Act, 1890, Part III., came into operation.

The prevalence in each quarter of each infectious disease is shown in the following table :—

| | 1st Qr. | | 2nd Qr. | | 3rd Qr. | | 4th. Qr. | | Year | | Total |
|----------------------|---------|------|---------|------|---------|------|----------|------|-------|------|-------|
| | under | over | under | over | under | over | under | over | under | over | |
| | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| Scarlatina | ... | 1 | 1 | 1 | ... | 3 | ... | 2 | 1 | 7 | 8 |
| Diphtheria | 2 | 3 | ... | 1 | ... | 1 | ... | 5 | 2 | 10 | 12 |
| Membranous Croup ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 |
| Enteric Fever | 4 | 11 | ... | 5 | ... | 3 | ... | 1 | 4 | 20 | 24 |
| Erysipelas | ... | ... | ... | ... | ... | 4 | ... | 5 | ... | 9 | 9 |
| Total..... | 6 | 16 | 1 | 7 | ... | 11 | ... | 13 | 7 | 47 | 54 |

INFLUENZA caused 8 deaths, 5 of which were among males, and 3 among females. In the epidemic of 1890 there were no deaths in this district. One child died between 2 and 5 years, 1 person died between 15 and 25 years; 1 died between 50 and 60 years; while 5 persons died aged 65 years and upwards. The deaths from lung diseases were also higher than usual during the first quarter of the year.

At Wick, there was a small outbreak of enteric fever, in a cottage occupied by poor people, who kept it in a very dirty condition. The house was occupied by Thomas Watts, his wife and six children. There were four boys, aged respectively 17, 16, 12 and 6 years; and two girls, aged 8 and 3 years. There were no drains or closets inside the house. There were two living rooms and a washhouse on the ground floor, and three bedrooms on the first floor. The well was not used, and the pump had been chained up, for the water was not safe to drink, and good water was obtained from a neighbour's well. In a small back yard there was an outdoor w.c., furnished with a long hopper, and flushed by throwing down water. There was no sink in the house, and all dirty water was thrown down a drain in the back yard, which was furnished with a bell trap. All the drainage was carried into a cesspool.

There had been previously no recent cases of enteric fever in the village. A brother who had returned from sea a short time before appears to have been the cause of the illness.

His history showed that he left Hull in June, 1890, in a sailing vessel on a voyage to Buenos Ayres, where he arrived early in September, 1890, and stayed there until October 25th. On November 7th, 1890, he had dysentery, and he was in bed for a fortnight, while on the voyage to Valparaiso. The water tanks had been filled in England, and the supply lasted until near the end of the Buenos Ayres visit, when they were filled with the river water, which was considered good. He was well again before they arrived at Valparaiso, which was reached on December 9th 1890.

Returning to Gibraltar, he had a second attack when crossing the Equator; he then sailed to Valencia where fresh water was obtained. All the crew were then well until they reached Santos early in September, 1891, where the ship remained up to October 14th. Santos is a small, dirty, unhealthy town on the west coast of Brazil, it lies on swampy ground, and seven miles from the mouth of a river. Yellow fever is very common here and many deaths occur amongst sailors and emigrants.

On October, 13th, 1891, he had yellow fever, but he was able to get up on October 22nd. A comrade, who had the fever on October 18th, died at sea four days afterwards, and a few others were ill.

He then sailed to Barbadoes and to a town on the Bull River, in South Carolina, U.S., arriving at the latter place on January 1st, 1892. Here they were put in quarantine for a week, and the ship was cleansed and fumigated with burning sulphur.

Leaving here on January 25th, he arrived at Swansea on March 12th, 1892. He came home to Wick on March 15th, much shattered in health after all his hard life at sea. He had diarrhœa when at home and the excreta were of a very offensive nature. He went away to lodge in a house at Hampton Court, Littlehampton, on June 7th. On June 7th Mrs Watts and her son James, aged six years, were taken ill with enteric fever ; in five days another son was attacked, and on June 26th two other children fell ill. Another was attacked on July 1st, and the last case occurred on July 27th.

A girl, 11 years old, who lived close to, and often visited the above house, fell ill with enteric fever on June 24th, but she recovered ; her home was clean and neat.

There was some difficulty in dealing with the Watts's house. The family were supported out of the rates, and as there was no garden ground in which to bury the excreta, four loads of good loam were obtained in which the excreta were thrown, and the earth was afterwards removed and buried. Two trained nurses were employed and disinfectants were freely supplied. There was no spread of the disease, and the Inspector visited the house daily for a month, to see that all directions were strictly carried out.

ENTERIC FEVER AT WEST TARRING.

In January and February there was an outbreak of enteric fever in ten houses at West Tarring. The cottages have been erected within the last ten years on land to the north of the railway and between West Worthing and the old village of Tarring. Each house has 2 livingrooms, a washhouse and 3 bedrooms ; there are no drains or closets within the four walls. Each house has been built on old meadow land, which was sold a few years ago for building purposes.

The sink drains deliver in the open air on to gully traps which are connected with a main drain.

In each back yard there is an outdoor closet, furnished in some cases with a long hopper pan, and in three cases with a short hopper pan, and a separate flushing tank is provided for each closet. The situation is open and there is no overcrowding of the site.

The drains pass into a main sewer connected with the Worthing drainage system, and large ventilators are provided at convenient spots. The water supply is from the West Worthing Waterworks Company, and it is on the intermittent system. Each house has a tank on the first floor whence water is drawn for drinking purposes and whence the flushing tanks are filled.

The condition of the water supply has been described in my report on Worthing. The empty state of the water mains at night time allowed the balls in the hydrant boxes to fall, and so dirty water from the roads could easily enter. The surface of the roads was in a very dirty condition, as they had not then been taken over by the Authority. The hydrants were cleaned out and surrounded by stone blocks so as to prevent dirty water entering. The fever cases then ceased. The waterworks company are now about to provide a constant supply, and a tank will be made on the Downs so as to effect this purpose.

There was only one case in each of nine houses, and there were two in the tenth house.

There were no cases in the old village, where the houses have shallow wells, and where there is no public drainage system. The houses that have been built in recent years under the Model Byelaws were the ones affected, while there was not a case in the old houses where a primitive condition of water supply and drainage exist.

In the ten houses there were the following inmates :

| Adults. | | Children. | | Cases. | |
|---------|----|-----------|-------|--------|-----|
| M. | F. | M. | F. | M. | F. |
| 19 | 14 | ... | 27 13 | ... | 9 2 |

Thus there were 33 adults and 40 children living in these ten houses, under similar conditions, and eleven children were attacked ; two of these died. The ages of those attacked were as follows :—

| | | | | | |
|-------------------|-----|-----|-----|-----|------|
| Under 5 years | ... | ... | ... | ... | 2 |
| 5 to 10 years ... | ... | ... | ... | ... | 6 |
| 10 to 15 years | ... | ... | ... | ... | 1 |
| 15 to 25 years | ... | ... | ... | ... | 2 |
| over 25 years ... | ... | ... | ... | ... | none |

SYSTEMATIC INSPECTION.

A visit has been paid to almost every house in the district, and to the more thickly populated parts the visits have been very frequently repeated, and a great number of minor nuisances abated at the request of the Inspector.

| | | | |
|---|-----|-----|-----|
| Number of nuisances reported | ... | ... | 136 |
| Number of nuisances abated without notice | ... | ... | 119 |
| Number of nuisances abated with notice | ... | ... | 17 |
| Number of houses disinfected by Inspector | ... | ... | 19 |
| Number of houses cleansed and limewashed | ... | ... | 7 |
| Water certificates granted for new houses | ... | ... | 26 |
| Insufficient water supply | ... | ... | 3 |
| Wells dug | ... | ... | 2 |
| Tanks provided | ... | ... | 1 |
| Samples of water analysed | ... | ... | 7 |
| Samples of water polluted | ... | ... | 2 |
| Old closets converted into earth closets | ... | ... | 9 |
| Cases of overcrowding reported | ... | ... | 5 |
| Cases of overcrowding abated | ... | ... | 5 |
| Number of fresh cowsheds registered | ... | ... | 2 |

Some cases of scarlet fever, introduced into the district by visitors from London, required strict supervision to prevent spreading.

In addition to the above, several matters were reported to the Parochial Committees, and steps were taken under their direction.

The scavenging at Broadwater has been under the supervision of the Inspector, necessitating frequent visitation with satisfactory results.

INQUESTS were held in 3 cases:—Male, 57 years, suicide by hanging; male, 75 years, accidental fall; female, 95 years, accidental fall.

There were three deaths returned as “not certified” out of a total of 143 deaths:—Female, 56 years, heart disease; female, 16 hours, malformation; male, 1 hour, premature birth.

EAST PRESTON RURAL SANITARY DISTRICT.

TABLE 1.—Showing the Deaths at various groups of ages in the ten years, 1883-92.

| Year. | At all Ages. | Under 1 Year. | 1 to 5. | 5 to 15. | 15 to 25. | 25 to 60. | 60 and over. |
|-------------|--------------|---------------|---------|----------|-----------|-----------|--------------|
| 1883..... | 130 | 21 | 11 | 5 | 4 | 34 | 55 |
| 1884..... | 116 | 23 | 12 | 7 | 4 | 30 | 40 |
| 1885..... | 132 | 19 | 11 | 7 | 8 | 30 | 57 |
| 1886..... | 106 | 19 | 15 | 4 | 1 | 21 | 46 |
| 1887..... | 114 | 10 | 5 | 10 | 11 | 24 | 54 |
| 1888..... | 108 | 15 | 14 | 10 | 7 | 21 | 41 |
| 1889..... | 116 | 20 | 8 | 4 | 6 | 29 | 49 |
| 1890..... | 122 | 18 | 8 | 2 | 9 | 28 | 57 |
| 1891..... | 123 | 25 | 8 | 5 | 6 | 24 | 55 |
| 1892..... | 143 | 19 | 11 | 7 | 6 | 31 | 69 |
| Total | 1210 | 189 | 103 | 61 | 62 | 272 | 523 |

TABLE 2.—Showing the Deaths and Death-rate in each of the ten years, 1883-92, from Zymotic Diseases.

| YEAR. | Small Pox. | Measles. | Scarlatina. | Diphtheria. | Whoop-cough. | Con. Fevers. | | | Diarrhoea and Dysentery. | Rheumatic Fever. | Erysipelas. | Pyæmia. | Puerperal Fever. | TOTAL. | Rate per 1000 persons living. |
|-------|------------|----------|-------------|-------------|--------------|--------------|----------|--------|--------------------------|------------------|-------------|---------|------------------|--------|-------------------------------|
| | | | | | | Typhus. | Enteric. | Other. | | | | | | | |
| 1883 | ... | 6 | ... | 1 | ... | ... | ... | ... | 2 | ... | ... | ... | ... | 9 | 1'0 |
| 1884 | ... | 2 | 2 | 4 | ... | ... | ... | ... | 2 | ... | 1 | ... | ... | 11 | 1'3 |
| 1885 | ... | 1 | 1 | 2 | 2 | ... | ... | ... | 2 | ... | ... | ... | ... | 8 | 0'9 |
| 1886 | ... | ... | 2 | 2 | 4 | ... | ... | ... | 6 | ... | ... | ... | ... | 14 | 1'6 |
| 1887 | ... | ... | 1 | 2 | ... | ... | 1 | ... | 5 | ... | ... | ... | ... | 9 | 1'0 |
| 1888 | ... | ... | 2 | 4 | 9 | ... | ... | ... | 1 | ... | ... | ... | 1 | 17 | 1'9 |
| 1889 | ... | 1 | ... | 4 | 2 | ... | ... | ... | 1 | ... | ... | ... | ... | 8 | 0'9 |
| 1890 | ... | ... | ... | 1 | 2 | ... | ... | ... | 3 | ... | ... | ... | ... | 6 | 0'6 |
| 1891 | ... | 2 | ... | ... | 2 | ... | 2 | ... | 2 | ... | 2 | ... | ... | 10 | 1'1 |
| 1892 | ... | ... | ... | 2 | 1 | ... | 2 | ... | 1 | ... | ... | ... | ... | 6 | 0'7 |
| Tl. | — | 12 | 8 | 22 | 22 | ... | 5 | — | 25 | — | 3 | — | 1 | 98 | 1'1 |

(A)—Table of DEATHS during the Year 1892, in the Rural Sanitary

| Names of Localities adopted for the purpose of these Statistics; Public Institutions being shown as separate localities. (a) | MORTALITY FROM ALL CAUSES, AT SUBJOINED AGES. | | | | | | | (i) | 1 | 2 | 3 |
|---|--|----------------------|-----------------------|------------------------|-------------------------|-------------------------|------------------------|--------------------------------|---------------------|----------------------|----------------------|
| | At all ages. (b) | Under 1 year. (c) | 1 and under 5. (d) | 5 and under 15. (e) | 15 and under 25. (f) | 25 and under 65. (g) | 65 and upwards. (h) | | Small Pox. | Scarlatina. | Diphtheria. |
| Worthing sub-district | 60 | 9 | 4 | 5 | 3 | 19 | 20 | Under 5 5 upwards. | | | 1 1 |
| Littlehampton sub-district ... | 36 | 3 | 3 | 2 | — | 12 | 16 | Under 5 5 upwards. | | | |
| Arundel sub-district | 34 | 7 | 4 | — | 3 | 7 | 13 | Under 5 5 upwards. | | | |
| East Preston Workhouse..... | 30 | 1 | — | — | — | 10 | 19 | Under 5 5 upwards. | | | |
| | | | | | | | | Under 5 5 upwards. | | | |
| | | | | | | | | Under 5 5 upwards. | | | |
| | | | | | | | | Under 5 5 upwards. | | | |
| | | | | | | | | Under 5 5 upwards. | | | |
| | | | | | | | | Under 5 5 upwards. | | | |
| | | | | | | | | Under 5 5 upwards. | | | |
| TOTALS | 160 | 20 | 11 | 7 | 6 | 48 | 68 | Under 5 5 upwards. | | | 1 1 |
| The subjoined numbers have also to be taken into | | | | | | | | | | | |
| Deaths occurring outside the District among persons belonging thereto..... | — | — | — | — | — | — | — | Under 5 5 upwards. | | | |
| Deaths occurring within the District among persons not belonging thereto..... | 17 | 1 | — | — | — | 7 | 9 | Under 5 5 upwards. | | | |

District of EAST PRESTON, classified according to Diseases, Ages, and Localities.

MORTALITY FROM SUBJOINED CAUSES, DISTINGUISHING DEATHS OF CHILDREN
UNDER FIVE YEARS OF AGE.

[illegible]

account in judging of the above records of mortality.

[illegible]

(B)—Table of POPULATION, BIRTHS, AND OF NEW CASES OF
of Health, during the year 1892, in the Rural Sanitary District of

| Names of Localities adopted for the purpose of these Statistics; Public Institutions being shown as separate localities. (a) | POPULATION AT ALL AGES. | | Registered Births. (d) | Aged under 5 or over 5. (e) | NEW CASES OF COMING TO THE KNOW- LEDGE OF | | | | |
|---|----------------------------|---|-------------------------------|--|---|---------------------------------|---------------------------------|--|-----------------------------|
| | Census 1891. (b) | Esti- mated to mid- dle of 1892. (c) | | | 1 Small Pox. (f) | 2 Scarlatina. (g) | 3 Diphtheria. (h) | 4 Membranous Croup. (i) | 5 Typhus. (j) |
| Worthing sub-district | 3261 | 3300 | 81 | Under 5 5 upwards. | | 1 4 | 2 5 | | |
| Littlehampton sub-district | 3285 | 3300 | 80 | Under 5 5 upwards. | | 3 3 | 5 5 | | |
| Arundel sub-district | 1984 | 2000 | 40 | Under 5 5 upwards. | | | | 1 1 | |
| East Preston Workhouse | 162 | 150 | 3 | Under 5 5 upwards. | | | | | |
| | | | | Under 5 5 upwards. | | | | | |
| | | | | Under 5 5 upwards. | | | | | |
| | | | | Under 5 5 upwards. | | | | | |
| | | | | Under 5 5 upwards. | | | | | |
| | | | | Under 5 5 upwards. | | | | | |
| | | | | Under 5 5 upwards. | | | | | |
| | | | | Under 5 5 upwards. | | | | | |
| | | | | Under 5 5 upwards. | | | | | |
| TOTALS | 8692 | 8750 | 204 | Under 5 5 upwards. | | 1 7 | 2 10 | 1 1 | |

MIDHURST
RURAL SANITARY DISTRICT.

pp. 95 et seq.

RURAL SANITARY DISTRICT OF MIDHURST.

| | |
|--------------------------------|--------|
| POPULATION IN 1871 | 13,042 |
| " " 1881 | 13,965 |
| " " 1891 | 14,235 |
| AREA IN ACRES | 66,571 |
| NUMBER OF HOUSES IN 1871 | 2,623 |
| " " 1881 | 2,797 |
| " " 1891 | 2,909 |

POPULATION.

The recent census returns show an increase of 270 persons over 1881, but this increase is much less than in the previous decade. The increase in Midhurst sub-district is chiefly due to the growth of Easebourne, while in the rest of the parishes but few changes are to be noticed.

The actual figures are these :—

| | 1871. | 1881. | 1891. |
|------------------------------|-------|-------|-------|
| Midhurst sub-district | 6059 | 6573 | 6834 |
| Fernhurst sub-district | 2226 | 2435 | 2514 |
| Harting sub-district | 4757 | 4957 | 4887 |
| | <hr/> | <hr/> | <hr/> |
| Total..... | 13042 | 13965 | 14235 |
| Increase..... | | 923 | 270 |

There are 28 parishes included in this agricultural district ; in 14 parishes there has been an increase, and in 14 parishes there has been a decrease.

The number of inhabited houses has increased by 108. There are 94 more houses in the Midhurst, 1 more in the Fernhurst, and 13 more in the Harting and sub-district. The above figures are, however, subject to revision.

BIRTHS AND BIRTH-RATE.

During the year 1892 the births of 356 children were registered; of these 173 were male, and 183 were female.

Estimating the population in the middle of the year at 14,260 the birth-rate was equal to 24·9 per 1,000 persons living.

The births and birth-rate in the district during the past ten years have been as follows :—

| Year. | Births. | Birth-rate. | Year. | Births. | Birth-rate. |
|----------|---------|-------------|----------|---------|-------------|
| 1883 ... | 402 ... | 28·5 | 1888 ... | 399 ... | 28·0 |
| 1884 ... | 419 ... | 29·6 | 1889 ... | 366 ... | 25·7 |
| 1885 ... | 406 ... | 28·6 | 1890 ... | 348 .. | 24·4 |
| 1886 ... | 419 ... | 29·5 | 1891 ... | 353 ... | 24·7 |
| 1887 ... | 345 ... | 24·3 | 1892 ... | 356 ... | 24·9 |

The mean number of births is 381, and the mean birth-rate is 26·8 per 1,000 of population.

In England and Wales the birth-rate during the year was 30·5 per 1,000 persons living, a rate 1·2 per 1,000 higher than that in 1890, which was the lowest on record, 1·7 per 1,000 below the mean rate in the ten years 1882-91.

The following table shows the births and birth-rate in each locality during the past year :—

| | Births. 1892. | Birth-rate. 1892. |
|-------------------------------------|------------------|----------------------|
| Midhurst sub-district | 41 ... | 24·5 |
| Rest of Midhurst sub-district | 132 ... | 25·6 |
| Fernhurst sub-district | 65 ... | 25·8 |
| Harting sub-district | 115 ... | 23·5 |
| Total..... | 353 | 24·7 |

GENERAL MORTALITY.

There were 247 deaths registered in this district during the year 1892, and of these, twelve took place in Easebourne Workhouse. These twelve deaths have been distributed among the several parishes whence each inmate came, viz., Tillington, 3; Loxworth, 1; Heyshott, 1; Midhurst, 3; Easebourne, 3; Linchmere, 1; in all 12.

Estimating the population in the middle of the year at 14,260, the death-rate was equal to 17·3 per 1,000 persons living.

In country districts throughout England and Wales the rate of mortality in 1892 was 18·5 per 1,000 of population.

The variations in the death-rate during the past ten years have been as follows :—

| Year, | Deaths. | Death-rate, | Year. | Deaths. | Death-rate. |
|----------|---------|-------------|----------|---------|-------------|
| 1883 ... | 188 | 13·3 | 1888 ... | 191 | 13·4 |
| 1884 ... | 230 | 16·2 | 1889 ... | 157 | 11·0 |
| 1885 ... | 233 | 16·4 | 1890 ... | 191 | 13·4 |
| 1886 ... | 243 | 17·1 | 1891 ... | 267 | 18·7 |
| 1887 ... | 219 | 15·4 | 1892 ... | 247 | 17·3 |

The mean number of deaths is 216, and the mean death-rate is 15·2 per 1,000 of population.

There have been during this decade 3,814 births, so that the natural increase of population by excess of births over deaths was 1648. The actual increase as shown by the Census returns was 270, so that a large number of persons must have left the district.

The following table shows the deaths and death-rate in each locality during the past two years :—

| | Deaths. | | Death-rate. | | Population. |
|-----------------------------|---------|-------|-------------|-------|-------------|
| | 1891. | 1892. | 1891. | 1892. | |
| Midhurst Parish | 39 | 31 | 23·3 | 18·4 | 1680 |
| Easebourne Parish..... | 24 | 31 | 17·2 | 21·7 | 1430 |
| Rest of Midhurst sub-dist. | 84 | 72 | 22·3 | 19·2 | 3750 |
| Fernhurst sub-district ... | 43 | 39 | 17·1 | 15·5 | 2520 |
| Harting sub-district | 77 | 74 | 15·7 | 15·1 | 4880 |
| <hr/> | | | | | |
| Total..... | 267 | 247 | 18·7 | 17·3 | 14260 |

In each parish the deaths were thus distributed :—

| | | | | |
|-----------------------|------|------|-----------------|----|
| East Lavington | 1 | ... | Fernhurst | 15 |
| West Lavington | 3 | ... | Linchmere..... | 10 |
| Tillington..... | 28 | ... | Linch | 2 |
| Lodsworth | 16 | ... | Stedham..... | 7 |
| Selham..... | none | ... | Iping | 8 |
| Heyshott | 7 | ... | Trotton | 8 |
| Graffham | 2 | ... | Chithurst | 4 |
| Cocking | 6 | ... | Terwick | 5 |
| Midhurst | 31 | ... | Rogate | 12 |
| Woolbeding | 7 | ... | Harting | 21 |
| Easebourne | 31 | ... | Elsted..... | 2 |
| South Ambersham ... | 2 | ... | Treyford..... | 1 |
| North Ambersham ... | 3 | ... | Didling | 1 |
| Lurgashall | 9 | ... | Bepton | 5 |
| Total .. | | 247. | | |

INFANT MORTALITY.

The *infant mortality* is here given as measured by the number of deaths under one year of age to the total number of births in the year :—

| | Deaths under Births. one year. | Ratio to 1000 Births | |
|-------------------------------------|-----------------------------------|-------------------------|-------|
| Midhurst Parish | 41 | 3 | 73 |
| Easebourne Parish..... | 38 | 6 | 158 |
| Rest of Midhurst sub-district | 99 | 8 | 80 |
| Fernhurst sub-district..... | 65 | 6 | 92 |
| Harting sub-district | 113 | 15 | 132 |
| | <hr/> | <hr/> | <hr/> |
| Total | 356 | 38 | 106 |

In England and Wales the proportion of deaths under one year of age to registered births was 148 per 1,000 during the past year, the mean proportion in the preceding ten years having been 144.

The thirty-eight *infantile* deaths include seven from whooping-cough, one from diarrhoea, two from tuberculosis, one from convulsions, four from bronchitis, one from enteritis, six from debility, three from marasmus, two from malformation, and one from an accident; eleven infants were born prematurely.

ZYMOTIC MORTALITY.

The deaths from zymotic disease were 13 in the case of those which are notifiable, and 9 in the other class where the number of cases cannot be obtained.

Adding the two classes together, there is a total of 22 deaths with a zymotic mortality of 1·5 per 1000.

| | Cases. | Deaths. |
|-----------------------|-----------------|---------|
| Small-pox | none | none |
| Scarlatina | 25 | none |
| Diphtheria | 58 | 12 |
| Membranous Croup..... | none | none |
| Fever { | Typhus | none |
| | Enteric | 3 |
| | Continued..... | none |
| | Relapsing | none |
| | Puerperal | none |
| | Cholera..... | none |
| Erysipelas | 14 | 1 |
| Total | 100 | 13 |

In the other class the deaths were as follows :—

| | Deaths. |
|------------------------------|---------|
| Measles | none |
| Whooping Cough | 7 |
| Diarrhœa and Dysentery | 1 |
| Rheumatic Fever | 1 |
| Total | 9 |

The prevalence in each quarter of each infectious disease is shown in the following table :—

| | 1st Qr. | | 2nd Qr. | | 3rd Qr. | | 4th. Qr. | | Year | | Total |
|-------------------------|---------|------|---------|------|---------|------|----------|------|-------|------|-------|
| | under | over | under | over | under | over | under | over | under | over | |
| | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| Scarlatina | ... | ... | 2 | 13 | ... | 3 | ... | 7 | 2 | 23 | 25 |
| Diphtheria | ... | 13 | ... | 9 | 3 | 21 | ... | 12 | 3 | 55 | 58 |
| Membranous Croup | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Enteric Fever | ... | ... | ... | ... | ... | 3 | ... | ... | ... | 3 | 3 |
| Erysipelas | ... | 4 | ... | 2 | ... | 5 | ... | 3 | ... | 14 | 14 |
| Total..... | ... | 17 | 2 | 24 | 3 | 32 | ... | 22 | 5 | 95 | 100 |

DIPHTHERIA was the only notifiable infectious disease which prevailed in the district. About fifteen years ago it was often met with on the cold clay to the north or Fernhurst district; now it is seldom met with there, but it appears on higher ground forming the Lower Greensand beds.

There were fifteen cases at Tillington without a single death, while at Midhurst there were thirteen cases and four deaths, and at Easebourne eleven cases and also four deaths. In July there was a small outbreak at Midhurst, which seemed due to school attendance. The disease appeared in four houses about the same time and the first child attacked in each house had been attending the infant school. The school closets had dirty hopper pans with a very poor flush of water, and there was also a foul dust bin. These matters were remedied and no fresh cases occurred. In other instances there was no definite cause to be made out. An occasional case would appear in an isolated house throughout the district from time to time where no history of infection could be made out, and where the milk supply was good. Milk seldom forms part of the diet amongst the poor, but now and then some skimmed milk is supplied by a farmer to his workpeople.

SCARLET FEVER caused no deaths, but a few cases occurred during the year in various parts of the district.

All the above cases were visited, and sometimes a defective drain was met with and remedied. The children in an infected house were kept from school, and when the cases were well again the rooms were fumigated and cleansed.

The Infectious Disease (Notification) Act came into operation on January 1st, 1890, but no isolation hospital has yet been provided.

INFLUENZA was very prevalent in the first quarter of the year, when it caused 25 deaths against 5 in 1890. It prevailed all through the district, but it was more especially fatal at Tillington, Lodsworth, Midhurst, Stedham, Iping, Rogate and Harting.

It was most fatal among adults and aged people. Two infants died under 1 year of age; and 1 child died between 2 and 5 years of age; 2 adults died between 15 and 25 years; 10 persons died between 25 and 60 years; and 11 persons died aged 60 years and upwards. Of the 25 who died, 16 were male, and 9 were female.

WATER SUPPLY.

There is no public water supply in the district. I have often advised that Midhurst should have one, but the proposal has never been adopted. A great many visitors come to the town, attracted by the beauty of the surrounding country, but the inhabitants are much opposed to any scheme which would involve expense. In the meantime the place is very healthy and the death-rate is low.

At Easebourne there is a fine spring whence the inhabitants obtain good water from a main laid through the village. This supply is free and it is given by Earl Egmont.

In other parts of the district the supply is obtained from wells, dipping holes and tanks, and, as a rule, good water is obtained. Constant attention has to be paid to the cleansing of wells and tanks, and to the kerbing being raised so as to prevent surface water flowing in.

DRAINAGE AND SEWAGE.

A good system of drainage is much required at Midhurst, but there is much opposition to any scheme on account of the expense. Part of the present drainage flows to the north, where it forms a nuisance by flowing into a ditch, and thence into the river. Another portion flows into the South Pond, which is often in a very foul condition, and where several feet of black mud have accumulated. The Authority have often discussed the question, but nothing has been done.

At Easebourne, some new houses have during the last few years been built, and these are drained in a satisfactory manner, the effluent passing into the river near the North Mill, after it has been roughly filtered.

In other parts of the district, no main system of drainage is required. There is generally enough land around each house, whereby any such material can be utilised on the soil.

BYE-LAWS.

Bye-laws were made in 1888, in respect to new streets and buildings, for the contributory places of Midhurst, Easebourne, Bepton, and West Lavington. They were allowed by the Local Government Board on November, 24th, 1888.

No regulations or bye-laws have been made with regard to scavenging or cleansing.

Bye-laws for the regulation of slaughter-houses have been adopted for the parishes of Midhurst, Easebourne, Bepton, Harting, and West Lavington.

THE COWSHEDS AND DAIRIES are kept clean, and provided with good water, light and ventilation. As in many country districts, the cows are kept in the meadows all day for the greater part of the year, and they are not confined as they are in large towns.

MARGARINE is sold in a few shops, and it is sold in accordance with the requirements of the Act.

THE BAKEHOUSES are limewashed twice a year. They are very well kept, and in no case is there any drain within the building.

THE SLAUGHTER-HOUSES are very fairly kept, and any refuse or offal is removed as soon as possible; the walls are regularly limewashed.

Four cases of OVERCROWDING were abated during the year.

No ARTICLES OF FOOD were condemned during the year.

No proceedings were taken before the Magistrates during the past year.

INQUESTS were held in 10 cases :—Male, 8 years, accidentally drowned; male, 9 years, tubercular meningitis; male, 17 days, accidentally suffocated in bed; male, 7 years, accidentally drowned; male, 12 years, accidentally drowned; male, 23 years, accidentally run over; male, 56 years, heart disease; female, 68 years, heart disease; male, 71 years, accidentally suffocated during a fire; female, 34 years, internal hæmorrhage.

There were 3 deaths returned as “not certified,” out of a total of 247 deaths: Male, 16 months, inflammation of the lungs; male, 1 month, malnutrition; male, 2 hours, premature birth.

SYSTEMATIC INSPECTION.

The following is a summary of work done during the past year; it consists chiefly in the ordinary routine work of abating minor nuisances, of cleansing houses and in looking after the water supply.

| | | | | | |
|--|-----|-----|-----|-----|-----|
| No. of houses visited | ... | ... | ... | ... | 253 |
| Number of nuisances reported | ... | ... | ... | ... | 77 |
| Number of nuisances abated without notice | ... | ... | ... | ... | 52 |
| Number of nuisances abated with notice | ... | ... | ... | ... | 25 |
| Number of houses reported unfit for habitation | ... | ... | ... | ... | 1 |
| Number of houses cleansed and disinfected | ... | ... | ... | ... | 40 |

| | | |
|---|--------|------|
| Number of houses cleansed and limewashed | ... | 43 |
| Water certificates granted for new houses | ... | |
| Wells dug for improved supply | ... .. | 1 |
| Wells cleansed | ... .. | 4 |
| Cases of overcrowding | ... .. | 4 |
| Cases of overcrowding abated | ... .. | 4 |
| Closets erected or improved | ... .. | 8 |
| Earth closets provided | ... .. | 5 |
| Samples of water analysed | ... .. | 10 |
| Samples of water polluted | ... .. | 6 |
| Legal proceedings | ... .. | none |

SOUTH HARTING.

The following report by the Sanitary Inspector, Mr. A. G. Gibbs, on this village, which consists of 84 houses, was made in December, and it was referred to a Parochial Committee.

There is a stream running through the village, which has its source from a small lake, situated under the South Downs. From this lake water is pumped to Up Park House. The pumps are worked four times in each week by an overshot water-wheel, which is driven by water from the lake. The water which drives this wheel and the overflow water, flows in a two feet culvert for about 300 yards. At this point it is joined by the overflow waters from two ponds in South Gardens. Its source is then open till it reaches the schools. Here it enters a three feet culvert, constructed under the school yard, and thence under a house occupied by Frederick Blackmore. At this point the stream again flows into the open till it reaches the house occupied by Arthur Clarke, in the East Harting Road, where it enters another culvert of about 40 yards long. It then has an open course by Harting Mill, and eventually enters the river Rother.

There is a one foot square rubble stone drain laid in the main street from a point near to Mr Taylor's shop, to a point near to the Ship Inn, delivering into the culvert. A similar drain is laid from the Chapel in the Petersfield Road to and delivering into the culvert; also a drain from the Parsonage House entrance in the North Lane to and delivering into the culvert in the East Harting Road.

The drains were originally intended to carry away storm waters from the roads. They are now also used to convey sewage matters to the stream.

The following house drains are connected to the road drains—

MAIN STREET.

- 11 sink drains.
- 1 soil drain.
- 2 overflow soil drains.
- 2 slaughter yard drains.

PETERSFIELD ROAD.

- 2 sink drains.
- 1 soil drain.
- 1 urinal drain.

NORTH LANE.

- 10 sink drains.
- 2 overflow soil drains.
- 2 slaughter yard drains.

EAST HARTING ROAD.

- 13 sink drains,

Besides, the refuse matter from 18 houses is thrown into the stream, 4 sink drains deliver direct into it, and the contents of three pail closets are periodically emptied into it.

A great nuisance is also caused by liquid sewage being frequently pumped into the water channel of the road, from a house in North Lane.

I find two houses are fitted with very defective w.c. apparatus known as the "pan," closet. These are inside of the houses. I called the occupiers' attention to them, and they both expressed their willingness to have more modern and better apparatus fixed.

At 20 houses the drain inlets are trapped by bell traps. This is a defective and an unsafe trap. At 3 houses the sink waste pipes are in direct communication with a drain, 3 sink wastes deliver inside the house, 2 over bell traps and 1 over a gully trap. Two drain inlets are untrapped and are most offensive.

The street drains are totally unfit for carrying sewage matter, being square and constructed of irregular pieces of stone.

The sewage after it reaches the culvert does not appear to be carried away by the stream, but is retained, owing to a large accumulation of pots, tins, brickbats, &c., which are thrown into the stream by the inhabitants. Seventeen years ago when the culverts were cleansed, a large accumulation of foul solid matter was found.

At the house where the stream runs under, a trap door is made in the floor, this causes the house to be very unwholesome, particularly in hot and dry weather, owing to the decomposition of foul matter in the culvert.

The water supply of the village is derived from—

1—The stream.

2—Wells.

3—Storage of rain water.

Eighteen houses derive a supply from a well 40 feet deep, situate near to the schools. In dry weather this well gets rather bad. Ten houses obtain a supply from a well 45 feet deep, situate in a yard known as Billingsgate. This well, although on higher ground yields a plentiful supply. Seven houses obtain a supply from a well 70 feet deep, situated in North Lane, which has not been known to fail except once, and that during 1887. Nineteen houses are supplied from wells within their own curtilage ranging from 30 feet to 60 feet deep. These vary in supply, but they yield sufficient. Twelve houses obtain a supply from the stream, but 11 of these are situated above where the pollution of the stream takes place, and one below, viz., Harting Mill House; 3 houses obtain a supply from rain water.

The drainage of sewage into the street drains, and thence to the stream is a great nuisance. The system appears to disatisfy the residents, although resorted to by nearly all of them.

The only way to abate the nuisance is to disconnect all house drains from the road drains. Were you to do this without finding a drain suitable for receiving and carrying away sewage of the village, it would necessitate the construction of a great many cesspools. These in a great many instances would have to be constructed near to the dwellings and wells, or in the roads. The system is not a desirable one to recommend or enforce in any village, as it would probably pollute many sources of water supply and eventually create a worse state of things than at the present time exists; and the cost of constructing sufficient cesspools for the storage of sewage, and the diversion of existing house drains, to them, would nearly or quite cover the cost of laying a drain through the village.

I would ask you to carefully consider the question and would recommend you to consider the desirability of laying a drain, rather than calling upon the owners to disconnect from the road drains without first finding them a suitable drain to connect to, as this would mean the honeycombing of the place with cesspools. If you do not feel that a rate should be levied in the parish or a part of it, I suggest that the owners be approached with a view to getting each of them to lay down their respective proportionate sums to defray the cost of such covering.

Where drain inlets are inside of houses the owners should be called upon to place them outside.

Gully traps should be laid in the place of existing bell traps.

Sink waste pipes which are in direct communication with drains, should be made to deliver in the open air over a channel leading to a properly trapped gully, and these defects the owners should be called upon to remedy.

The occupiers of the house in North Lane should be called upon to desist from pumping liquid sewage into the road channel, and the drain conveying it should be cut off.

MIDHURST RURAL SANITARY DISTRICT.

TABLE 1.—Showing the Deaths at various groups of ages in the ten years, 1883-92.

| Year. | At all Ages. | Under 1 Year. | 1 to 5. | 5 to 15. | 15 to 25. | 25 to 60. | 60 and over. |
|-------------|--------------|---------------|---------|----------|-----------|-----------|--------------|
| 1883..... | 188 | 27 | 14 | 7 | 13 | 42 | 85 |
| 1884..... | 230 | 38 | 24 | 11 | 16 | 54 | 87 |
| 1885..... | 233 | 32 | 23 | 15 | 17 | 47 | 99 |
| 1886..... | 243 | 47 | 24 | 14 | 12 | 49 | 97 |
| 1887..... | 219 | 23 | 18 | 10 | 14 | 50 | 104 |
| 1888..... | 191 | 26 | 21 | 9 | 6 | 53 | 76 |
| 1889..... | 157 | 24 | 11 | 4 | 7 | 46 | 65 |
| 1890..... | 191 | 30 | 14 | 6 | 6 | 41 | 94 |
| 1891..... | 267 | 45 | 26 | 16 | 10 | 45 | 125 |
| 1892.. | 247 | 38 | 24 | 13 | 17 | 62 | 93 |
| Total | 2166 | 330 | 199 | 105 | 118 | 489 | 925 |

MIDHURST RURAL SANITARY DISTRICT.

TABLE 2.—Showing the Deaths and Death-rate in each of the ten years, 1883-92, from Zymotic Diseases.

| YEAR. | Small Pox. | Measles. | Scarlatina. | Diphtheria. | Whoop-cough. | Con. Fevers. | | | Diarrhoea and Dysentery. | Rheumatic Fever. | Erysipelas. | Pyæmia. | Puerperal Fever. | TOTAL. | Rate per 1000 persons living. |
|-------|------------|----------|-------------|-------------|--------------|--------------|----------|--------|--------------------------|------------------|-------------|---------|------------------|--------|-------------------------------|
| | | | | | | Typhus. | Enteric. | Other. | | | | | | | |
| 1883 | 5 | ... | 3 | 2 | 2 | ... | 1 | ... | 3 | ... | ... | ... | ... | 16 | 1'1 |
| 1884 | ... | ... | 7 | 2 | 3 | ... | 2 | ... | 1 | ... | 3 | ... | ... | 18 | 1'2 |
| 1885 | 1 | 2 | 2 | 10 | 1 | ... | ... | ... | 4 | 2 | 3 | ... | ... | 25 | 1'7 |
| 1886 | ... | 8 | ... | 8 | 4 | ... | 7 | ... | 1 | 1 | ... | ... | 1 | 30 | 2'1 |
| 1887 | ... | 2 | ... | 1 | 2 | ... | 1 | ... | 1 | 2 | ... | ... | ... | 10 | 0'7 |
| 1888 | ... | ... | 1 | 3 | 11 | ... | 1 | ... | ... | ... | 1 | ... | 1 | 17 | 1'2 |
| 1889 | ... | 1 | ... | ... | 3 | ... | 2 | ... | 1 | 1 | ... | ... | ... | 8 | 0'5 |
| 1890 | ... | ... | 1 | ... | 3 | ... | 1 | ... | 2 | ... | ... | ... | ... | 7 | 0'4 |
| 1891 | ... | 1 | ... | 5 | 7 | ... | ... | ... | ... | 2 | ... | ... | ... | 15 | 1'0 |
| 1892 | ... | ... | ... | 12 | 7 | ... | ... | ... | 1 | 1 | 1 | ... | ... | 22 | 1'5 |
| Tl. | 6 | 14 | 14 | 43 | 43 | — | 15 | — | 14 | 9 | 8 | — | 2 | 168 | 1'1 |

(A)—Table of DEATHS during the Year 1892, in the Rural Sanitary

| Names of Localities adopted for the purpose of these Statistics; Public Institutions being shown as separate localities. (a) | MORTALITY FROM ALL CAUSES, AT SUBJOINED AGES. | | | | | | | (i) | | | |
|---|--|----------------------|-----------------------|------------------------|-------------------------|-------------------------|-------------------------|--------------------------------|-----------------|------------------|------------------|
| | At all ages. (b) | Under 1 year. (c) | 1 and under 5. (d) | 5 and under 15. (e) | 15 and under 25. (f) | 25 and under 65. (g) | 65 and up-wards. (h) | | 1 Small Pox. | 2 Scarlatina. | 3 Diphtheria. |
| Midhurst Parish..... | 28 | 3 | 2 | 2 | 4 | 8 | 9 | Under 5 5 upwards. | | | 2 2 |
| Easebourne Parish | 28 | 6 | 1 | 6 | 4 | 6 | 5 | Under 5 5 upwards. | | | 1 3 |
| Rest of Midhurst sub-district | 67 | 6 | 9 | 4 | 4 | 27 | 17 | Under 5 5 upwards. | | | 1 1 |
| Fernhurst sub-district | 38 | 6 | 8 | — | 3 | 11 | 10 | Under 5 5 upwards. | | | |
| Harting sub-district | 74 | 15 | 4 | 1 | 2 | 25 | 27 | Under 5 5 upwards. | | | 2 |
| Easebourne Workhouse | 12 | 2 | — | — | — | 1 | 9 | Under 5 5 upwards. | | | |
| | | | | | | | | Under 5 5 upwards. | | | |
| | | | | | | | | Under 5 5 upwards. | | | |
| | | | | | | | | Under 5 5 upwards. | | | |
| | | | | | | | | Under 5 5 upwards. | | | |
| TOTALS | 247 | 38 | 24 | 13 | 17 | 78 | 77 | Under 5 5 upwards. | | | 6 6 |

The subjoined numbers have also to be taken into

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|--------------------------------|--|--|--|
| Deaths occurring outside the District among persons belonging thereto..... | — | — | — | — | — | — | — | Under 5 5 upwards. | | | |
| Deaths occurring within the District among persons not belonging thereto..... | — | — | — | — | — | — | — | Under 5 5 upwards. | | | |

District of MIDHURST, classified according to Diseases, Ages, and Localities

MORTALITY FROM SUBJOINED CAUSES, DISTINGUISHING DEATHS OF CHILDREN
UNDER FIVE YEARS OF AGE.

| 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 |
|-------------------|---------|---------------------|------------|------------|------------|----------|-------------|----------|-----------------|--------------------------|------------------|-------|-----------|----------------------------------|----------------|-----------|---------------------|---------|
| Membranous Group. | FEVERS. | | | | | Cholera. | Erysipelas. | Measles. | Whooping Cough. | Diarrhoea and Dysentery. | Rheumatic Fever. | Ague. | Phthisis. | Bronchitis, Pneumonia, Pleurisy. | Heart Disease. | Injuries. | All other Diseases. | TOTALS. |
| | Typhus. | Enteric or Typhoid. | Continued. | Relapsing. | Puerperal. | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | 3 | 5 |
| | | | | | | | | | | | | | 3 | 2 | 3 | | 13 | 23 |
| | | | | | | | | | I | | | | | | | | 5 | 7 |
| | | | | | | | | | | | | | 4 | 3 | I | 2 | 8 | 21 |
| | | | | | | | | | 4 | | | | | 4 | | | 6 | 15 |
| | | | | | | | | | | | I | | 7 | 6 | 8 | 3 | 26 | 52 |
| | | | | | | | | | 2 | I | | | | 7 | | | 4 | 14 |
| | | | | | | | I | | | | | | 4 | I | 5 | | 13 | 24 |
| | | | | | | | | | | | | | | 2 | | | 15 | 19 |
| | | | | | | | | | | | | | 3 | 6 | 9 | I | 36 | 55 |
| | | | | | | | | | | | | | | | | I | I | 2 |
| | | | | | | | | | | | | | I | | I | | 8 | 10 |
| | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | 7 | I | | | | 13 | | I | 34 | 62 |
| | | | | | | | I | | | | I | | 22 | 18 | 27 | 6 | 104 | 185 |

account in judging of the above records of mortality.

[illegible]

(B)—Table of POPULATION, BIRTHS, AND OF NEW CASES OF
of Health, during the year 1892, in the Rural Sanitary District of

| Names of Localities adopted for the purpose of these Statistics; Public Institutions being shown as separate localities. (a) | POPULATION AT ALL AGES. | | Registered Births. (d) | Aged under 5 or over 5. (e) | NEW CASES OF COMING TO THE KNOW- OF | | | | |
|---|----------------------------|---|-------------------------------|--|---|----------------------|----------------------|-------------------------------|------------------|
| | Census 1891. (b) | Esti- mated to mid- dle of 1892. (c) | | | 1 Small Pox. | 2 Scarlatina. | 3 Diphtheria. | 4 Membranous Croup. | 5 Typhus. |
| Midhurst Parish..... | 1674 | 1680 | 41 | Under 5 5 upwards. | | 2 | 14 | | |
| Easebourne Parish..... | 1296 | 1330 | 36 | Under 5 5 upwards. | | 1 | 7 | | |
| Rest of Midhurst sub-district ... | 3769 | 3750 | 99 | Under 5 5 upwards. | | 6 | 31 | | |
| Fernhurst sub-district | 2514 | 2520 | 65 | Under 5 5 upwards. | | 2 6 | | | |
| Harting sub-district | 4887 | 4880 | 113 | Under 5 5 upwards. | | 8 | 3 | | |
| Easebourne Workhouse | 95 | 100 | 2 | Under 5 5 upwards. | | | | | |
| | | | | Under 5 5 upwards. | | | | | |
| | | | | Under 5 5 upwards. | | | | | |
| | | | | Under 5 5 upwards. | | | | | |
| | | | | Under 5 5 upwards. | | | | | |
| | | | | Under 5 5 upwards. | | | | | |
| TOTALS | 14235 | 14260 | 356 | Under 5 5 upwards. | | 2 23 | 3 55 | | |

INFECTIOUS SICKNESS, coming to the knowledge of the Medical Officer
MIDHURST; classified according to DISEASES, AGES, and LOCALITIES.

[illegible]

WESTBOURNE
RURAL SANITARY DISTRICT.

pp. 115 et seq.

RURAL SANITARY DISTRICT OF WESTBOURNE.

| | |
|--------------------------------|--------|
| POPULATION IN 1871 | 7,221 |
| " " 1881 | 7,420 |
| " " 1891 | 7,084 |
| AREA IN ACRES | 32,040 |
| NUMBER OF HOUSES IN 1871 | 1,495 |
| " " 1881 | 1,533 |
| " " 1891 | 1,515 |

POPULATION.

The population, which slightly increased from 1871 to 1881, showed a great decline in the last decade. In eight parishes there was a decrease in 1891 over 1881; in three there was a slight increase, and in one parish the figures were the same on each census-taking. There are only eighteen fewer inhabited houses, so that there is probably less overcrowding than before. The population is chiefly agricultural, but some along the coast, as at Bosham, are engaged in fishing and boating.

It will probably be found that agricultural depression is the chief cause of the decrease, and that young adults leave the district to obtain employment elsewhere.

The figures for each parish are here given :—

| | 1871. | 1881. | 1891. |
|--------------------|-------|-----------|----------|
| West Dean | 683 | 732 | 611 |
| East Marden | 81 | 91 | 74 |
| North Marden | 27 | 39 | 39 |
| Up Marden | 365 | 336 | 310 |
| Stoughton | 603 | 626 | 604 |
| Compton | 286 | 289 | 268 |
| Racton | 97 | 97 | 100 |
| Funtington | 1065 | 1158 | 1020 |
| Bosham..... | 1184 | 1255 | 1258 |
| Chidham | 314 | 266 | 241 |
| West Thorney | 181 | 131 | 150 |
| Westbourne | 2335 | 2450 | 2409 |
| Total..... | 7221 | 7420 | 7084 |
| | | Inc. 199. | Dec. 336 |

BIRTHS AND BIRTH-RATE.

During the year 1892 the births of 203 children were registered of these 115 were male, and 88 were female.

Estimating the population in the middle of the year at 7,050 the birth-rate was equal to 28·8 per 1,000 persons living.

The births and birth-rate in the district during the past ten years have been as follows :—

| Year. | Births. | Birth-rate. | Year. | Births. | Birth-rate |
|----------|---------|-------------|----------|---------|------------|
| 1883 ... | 215 ... | 29·2 | 1888 ... | 204 ... | 28·4 |
| 1884 ... | 222 ... | 30·3 | 1889 ... | 203 ... | 28·4 |
| 1885 ... | 212 ... | 29·0 | 1890 ... | 207 .. | 29·1 |
| 1886 ... | 208 ... | 28·6 | 1891 ... | 194 ... | 27·4 |
| 1887 ... | 225 ... | 31·1 | 1892 ... | 203 ... | 28·8 |

The mean number of births is 209, and the mean birth-rate is 29·0 per 1,000 of population.

In England and Wales the birth-rate during the year was 30·5 per 1,000 persons living, a rate 1·7 per 1,000 below the mean rate in the ten years 1882-91.

The following table shows the births and birth-rate in each locality during the past two years :—

| | Births. | | Birth-rate. | |
|---------------------------------|---------|--------|-------------|-------|
| | 1891 | 1892. | 1891 | 1892. |
| Funtington Parish | 27 | 24 ... | 26·4 | 28·8 |
| Bosham Parish | 52 | 51 ... | 41·3 | 40·5 |
| Westbourne Parish | 59 | 62 ... | 24·4 | 25·7 |
| Rest of Westbourne District ... | 56 | 66 ... | 23·3 | 27·8 |
| Total | 194 | 203 | 27·4 | 28·8 |

GENERAL MORTALITY.

There were 116 deaths registered in this district during the year 1892, and of these, 14 took place in Westbourne Workhouse. These deaths have been distributed among the several parishes whence each inmate came, viz., Compton, 1; Funtington, 2; Bosham, 4; Chidham, 2; Westbourne, 5; in all 14.

Estimating the population in the middle of the year at 7,050, the death-rate was equal to 16·4 per 1,000 persons living.

In country districts throughout England and Wales the rate of mortality in 1892 was 18·1 per 1,000 of population.

The variations in the death-rate during the past ten years have been as follows :—

| Year, | Deaths. | Death-rate. | Year. | Deaths. | Death-rate. |
|----------|---------|-------------|----------|---------|-------------|
| 1883 ... | 120 | 16·3 | 1888 ... | 96 | 13·4 |
| 1884 ... | 97 | 13·2 | 1889 ... | 89 | 12·4 |
| 1885 ... | 125 | 17·1 | 1890 ... | 97 | 13·6 |
| 1886 ... | 132 | 18·2 | 1891 ... | 124 | 17·5 |
| 1887 ... | 108 | 14·9 | 1892 ... | 116 | 16·4 |

The mean number of deaths is 110, and the mean death-rate is 15·3 per 1,000 of population.

There have been during the decade 2,093 births, so that the natural increase of population by excess of births over deaths was 989. The Census returns, however, show a *decrease* of 336, so that large numbers must have left the district in the past decade.

The following table shows the deaths and death-rate in each locality during the past two years :—

| | Deaths. | | | Death-rate. | |
|--------------------------------|---------|-------|-----|-------------|-------|
| | 1891. | 1892. | | 1891. | 1892. |
| Funtington Parish | 12 | 12 | ... | 11·7 | 14·4 |
| Bosham Parish | 22 | 23 | ... | 17·5 | 18·2 |
| Westbourne Parish | 51 | 49 | ... | 21·1 | 20·4 |
| Rest of Westbourne District... | 39 | 32 | ... | 16·9 | 13·6 |
| Total..... | 124 | 116 | ... | 17·5 | 16·4 |

In each parish the deaths were thus distributed :—

| | | | | |
|-----------------------|------|-----|--------------------|----|
| West Dean | 9 | ... | Racton | 1 |
| East Marden | 1 | ... | Funtington..... | 12 |
| North Marden.....none | ... | ... | Bosham | 23 |
| Up Marden | 1 | ... | Chidham, | 3 |
| Stoughton..... | 11 | ... | West Thorney | 2 |
| Compton | 4 | ... | Westbourne | 49 |
| Total | 116. | | | |

INFANT MORTALITY.

The *infant mortality* is here given as measured by the number of deaths under one year of age to the total number of births in the year :—

| | Deaths under Births one year | Ratio to 1000 Births | Ratio 1890 | Ratio 1889 |
|-----------------------------|---------------------------------|-------------------------|---------------|---------------|
| Funtington Parish | 24 none | none | none | 33 |
| Bosham Parish | 51 6 | 118 | 20 | 45 |
| Westbourne Parish | 62 10 | 161 | 71 | 54 |
| Rest of Westbourne District | 66 6 | 91 | 104 | 127 |
| Total..... | 203 22 | 108 | 63 | 69 |

In England and Wales the proportion of deaths under one year of age to registered births was 148 per 1,000 during the past year, the mean proportion in the preceding ten years having been 144.

The twenty-two *infantile* deaths include two from whooping-cough, two from diarrhoea, four from bronchitis, one from enteritis, and seven from debility ; six infants were born prematurely.

ZYMOTIC MORTALITY.

The deaths from zymotic diseases were 5 in the case of those which are notifiable, and 6 in the other class where the number of cases cannot be obtained.

Adding the two classes together, there is a total of 11 deaths with a zymotic mortality of 1·5 per 1000.

| | Cases. | Deaths. |
|-----------------------|-----------------|---------|
| Small-pox | none | none |
| Scarlatina | 7 | none |
| Diphtheria | 19 | 5 |
| Membranous Croup..... | none | none |
| Fever { | Typhus | none |
| | Enteric | 1 |
| | Continued..... | none |
| | Relapsing | none |
| | Puerperal | none |
| | Cholera... .. | none |
| Erysipelas | 3 | none |
| Total | 30 | 5 |

In the other class the deaths were as follows :—

| | |
|------------------------------|---------|
| | Deaths. |
| Measles | none |
| Whooping Cough | 4 |
| Diarrhœa and Dysentery | 2 |
| Rheumatic Fever | none |
| | <hr/> |
| Total | 6 |

The prevalence in each quarter of each infectious disease is shown in the following table :—

| | 1st Qr. | | 2nd Qr. | | 3rd Qr. | | 4th. Qr. | | Year | | Total |
|---------------------|---------|-------|---------|-------|---------|-------|----------|-------|-------|-------|-------|
| | under | over | under | over | under | over | under | over | under | over | |
| | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| Scarlatina | ... | ... | ... | ... | ... | 3 | ... | 4 | ... | 7 | 7 |
| Diphtheria | ... | ... | 1 | 7 | ... | 6 | 1 | 4 | 2 | 17 | 19 |
| Enteric Fever | ... | ... | ... | ... | ... | 1 | ... | ... | ... | 1 | 1 |
| Erysipelas..... | ... | ... | ... | ... | ... | 1 | ... | 2 | ... | 3 | 3 |
| | <hr/> | <hr/> | <hr/> | <hr/> | <hr/> | <hr/> | <hr/> | <hr/> | <hr/> | <hr/> | <hr/> |
| Total..... | ... | ... | 1 | 7 | ... | 11 | 1 | 10 | 2 | 28 | 30 |

The Infectious Diseases (Notification) Act, 1889, came into operation on December 31st, 1891, so that the above figures represent a first years' experience.

The Infectious Diseases (Prevention) Act, 1890, also came into operation on the same day.

There is no isolation hospital in the district.

Four schools were closed temporarily during the year owing to sickness.

SCARLATINA appeared in two houses at Nutbourne and in one house at Southbourne ; the cases were very light, and they all recovered. The rest of the district was free from the disease.

DIPHTHERIA was much more prevalent. It first appeared in May at Bosham, in a lonely cottage, where four children were attacked ; then in isolated or lonely spots in various parts of the district in June, July, August, October, November, and December.

The nineteen cases appeared in twelve houses during the year, and in three houses more than one child was attacked. It did not appear in any populous places, nor in the more dirty part of the district. Thus at Hermitage, which is in a very unsatisfactory condition, there was no case at all. There was, in fact, no prevalence of the disorder, and school attendance seemed to have no influence.

In all the above cases, each house was visited, disinfectants provided, school attendance stopped, and isolation carried out as well as possible. On recovery or death the houses were fumigated, cleansed, and limewashed.

INFLUENZA again appeared in the first quarter of the year, and it caused twelve deaths, against three in 1890. Deaths from lung diseases were also very prevalent during this period.

The deaths from Influenza were mostly among aged persons:—

Between twenty and twenty-five, one female.

„ fifty and sixty, one female.

„ sixty and sixty-five, none.

„ sixty-five and seventy, four males and three females.

„ seventy and eighty, three males.

The mortality in the first quarter was, therefore, much above the average, there being 55 deaths in 1892, against 30 and 47 in the two preceeding years.

DRAINAGE.

The drainage at Westbourne, Bosham and Hermitage, remains in precisely the same condition as detailed in my last annual report, to which reference should be made. In recent years, a great many closets have been altered or constructed with a view to make them less offensive. The water system is out of the question, as without a system of water carriage, the quantity to be dealt with would be enormously increased and rendered most difficult to be dealt with.

If received in cemented cesspools, these would required to be constantly emptied; if in cesspools with porous sides, the water supply would almost surely be polluted. The earth system or the pail system finds no favour amongst the people of the district.

The authority on my advice, settled on a system, which consists of a small ventilated cesspit, which by its size rendered it necessary to be cleaned out often, while dry earth or ashes could be thrown in by those who would take the trouble.

This, although by no means a perfect plan, is a great improvement on the old method.

A printed circular was issued stating the following points, which should be attended to in the construction of closets,

1.—The cesspit should be small, not exceeding the following dimensions:—depth 12 inches; length and width, 3 feet. Frequent cleansing out is thus rendered necessary. It is best that the cesspit should not be excavated, but be entirely above ground.

2.—Thorough ventilation of closet and separate ventilation of cesspit.

3.—Provision for frequent throwing of earth or ashes into the cesspit to deodorise deposit.

4.—Prevention of soakage from cesspit, and of access of rain water to it.

WATER SUPPLY.

The water supply is derived from deep and shallow wells, from springs and streams, and in a few places from tanks. In the villages on the chalk downs, the wells are often very deep, but the water so obtained is of good quality. Near the sea the water is often so brackish as to be unfit for drinking purposes.

In such cases one may have to bore for a hundred feet or more before good water can be obtained.

The flow of the sub-soil water in this district is from the north-west to the south-east, so that in sinking a well this fact must be borne in mind.

Eight new wells were sunk during the year, and some old ones were cleaned out and repaired.

There is no public water supply for any place in this district. At Hermitage and Bosham a better supply is required, but the cost of any scheme, however simple, has hitherto proved an obstacle.

SCAVENGING AND CLEANSING.

The houses in this district are so scattered, that it is not difficult to deal with all the house refuse by utilising it in the garden which surrounds the dwelling.

All uncooked vegetable matter might accumulate in a heap to form in due time vegetable mould.

The cinders could be sifted, so that the fine ash could be thrown on the ground to lighten the soil, while the larger pieces could be reburnt.

Any cooked matter might be thrown into the fire and burnt. The rest of the material which forms house refuse, could be dug in the ground or removed to some convenient spot.

At places like Boshani which are more populous, and the gardens or back yards are very small, I have often recommended that the refuse should be removed under sect. 42 of the Public Health Act, 1875, but without avail. Each occupier in such a case removes the material at intervals, but it is not done frequently enough as a rule.

The following is a summary of the work done by the Sanitary Inspector during the year :

| | | | | | |
|--|-----|-----|-----|-----|------|
| No. of houses visited | ... | ... | ... | ... | 210 |
| No. of Nuisances reported | ... | ... | ... | ... | 54 |
| No. of Nuisances abated | ... | ... | ... | ... | 54 |
| No. of Notices served | ... | ... | ... | ... | 38 |
| No. of houses reported unfit for habitation and closed | ... | ... | ... | ... | 4 |
| Houses cleansed and disinfected | ... | ... | ... | ... | 10 |
| Houses cleansed and limewashed | ... | ... | ... | ... | 8 |
| Cases of overcrowding reported | ... | ... | ... | ... | 1 |
| Cases of overcrowding abated | ... | ... | ... | ... | 1 |
| New closets erected | ... | ... | ... | ... | 20 |
| Old closets restored | ... | ... | ... | ... | 6 |
| Earth closets made | ... | ... | ... | ... | none |
| Wells sunk | ... | ... | ... | ... | 8 |
| Wells cleaned | ... | ... | ... | ... | 9 |
| Unwholesome food seized | ... | ... | ... | ... | none |
| Samples of water sent for analysis | ... | ... | ... | ... | 11 |
| Samples of water unfit for drinking | ... | ... | ... | ... | 1 |
| Underground water tanks supplied | ... | ... | ... | ... | 2 |

There is one COMMON LODGING-HOUSE at Hermitage in which a few lodgers are taken ; this is very well kept.

There are now twenty registered COWSHEDS AND DAIRIES, but many of them are on a very small scale ; they are well kept.

MARGARINE is not in much demand, but in such cases the regulations of the Act are complied with.

The BAKEHOUSES are fifteen in number ; they are often inspected, and they are kept in a clean condition,

There are but two SLAUGHTERHOUSES, which are very well attended to.

No PROCEEDINGS were taken before the Magistrates during the year.

One case of OVERCROWDING was abated.

There was no case in which it was necessary to condemn meat or any other article of food.

INQUESTS were held in 4 cases:—Female, 37 years, inflammation of the lungs; male, 39 years, gored by a bull; male, 6 days, inflammation of the lungs; male, 10 years, peritonitis.

There were one death returned as “not certified” out of a total of 116 deaths:—Male, 8 years, brain fever.



WESTBOURNE RURAL SANITARY DISTRICT.

TABLE 1.—Showing the Deaths at various groups of ages in the ten years, 1883-92.

| Year. | At all Ages. | Under 1 Year. | 1 to 5. | 5 to 15. | 15 to 25. | 25 to 60. | 60 and over. |
|-------------|--------------|---------------|---------|----------|-----------|-----------|--------------|
| 1883..... | 120 | 21 | 12 | 7 | 7 | 26 | 47 |
| 1884..... | 97 | 13 | 6 | 9 | 5 | 24 | 40 |
| 1885..... | 125 | 20 | 7 | 6 | 5 | 26 | 61 |
| 1886..... | 132 | 23 | 11 | 4 | 6 | 27 | 61 |
| 1887..... | 108 | 25 | 7 | 1 | 9 | 25 | 41 |
| 1888..... | 96 | 15 | 10 | 2 | 1 | 18 | 50 |
| 1889..... | 89 | 14 | 8 | 3 | 3 | 20 | 41 |
| 1890..... | 97 | 13 | 9 | 6 | 6 | 19 | 44 |
| 1891..... | 124 | 17 | 10 | 9 | 7 | 24 | 57 |
| 1892..... | 116 | 22 | 9 | 10 | 3 | 19 | 53 |
| Total | 1104 | 183 | 89 | 57 | 52 | 228 | 495 |

TABLE 2.—Showing the Deaths and Death-rate in each of the ten years, 1883-92, from Zymotic Diseases.

| YEAR. | Small Pox. | Measles. | Scarlatina. | Diphtheria. | Whoop-cough. | Con. Fevers. | | | Diarrhoea and Dysentery. | Rheumatic Fever. | Erysipelas. | Pyæmia. | Puerperal Fever. | TOTAL. | Rate per 1000 persons living. |
|-------|------------|----------|-------------|-------------|--------------|--------------|----------|--------|--------------------------|------------------|-------------|---------|------------------|--------|-------------------------------|
| | | | | | | Typhus. | Enteric. | Other. | | | | | | | |
| 1883 | ... | ... | ... | 3 | 1 | ... | 1 | ... | 2 | ... | ... | ... | ... | 7 | 0·9 |
| 1884 | ... | ... | ... | 6 | 4 | ... | ... | ... | 1 | ... | ... | ... | ... | 11 | 1·5 |
| 1885 | ... | ... | ... | ... | ... | ... | 10 | ... | 2 | ... | 1 | ... | ... | 13 | 1·8 |
| 1886 | ... | 2 | ... | ... | 3 | ... | 2 | ... | 1 | ... | ... | 1 | ... | 9 | 1·2 |
| 1887 | ... | ... | ... | ... | ... | ... | 2 | ... | 1 | ... | ... | ... | ... | 3 | 0·4 |
| 1888 | ... | 4 | ... | 1 | ... | ... | 1 | ... | ... | ... | 1 | ... | ... | 7 | 0·9 |
| 1889 | ... | ... | ... | ... | 9 | ... | 2 | ... | ... | ... | ... | ... | ... | 11 | 1·5 |
| 1890 | ... | ... | ... | 3 | 5 | ... | ... | ... | 1 | 1 | ... | ... | ... | 10 | 1·4 |
| 1891 | ... | ... | ... | 6 | 3 | ... | 1 | ... | 1 | ... | 1 | ... | ... | 12 | 1·7 |
| 1892 | ... | ... | ... | 5 | 4 | ... | ... | ... | 2 | ... | ... | ... | ... | 11 | 1·5 |
| Tl. | — | 6 | — | 24 | 29 | — | 19 | — | 11 | 1 | 3 | 1 | ... | 94 | 1·3 |

(A)—Table of DEATHS during the Year 1892, in the Rural Sanitary

| Names of Localities adopted for the purpose of these Statistics; Public Institutions being shown as separate localities. (a) | MORTALITY FROM ALL CAUSES, AT SUBJOINED AGES. | | | | | | | (i) | 1 Small Pox. | 2 Scarlatina. | 3 Diphtheria. |
|---|--|----------------------|-----------------------|------------------------|-------------------------|-------------------------|------------------------|--------------------------------|-----------------|------------------|------------------|
| | At all ages. (b) | Under 1 year. (c) | 1 and under 5. (d) | 5 and under 15. (e) | 15 and under 25. (f) | 25 and under 65. (g) | 65 and upwards. (h) | | | | |
| Funtington Parish..... | 10 | — | 1 | 1 | — | 1 | 7 | Under 5 5 upwards. | | | |
| Bosham Parish | 19 | 6 | 3 | — | — | 4 | 6 | Under 5 5 upwards. | | | |
| Westbourne Parish | 44 | 10 | 2 | 5 | 1 | 8 | 18 | Under 5 5 upwards. | | | 2 |
| Rest of District..... | 29 | 6 | 3 | 4 | 2 | 11 | 3 | Under 5 5 upwards. | | | 3 |
| Westbourne Workhouse | 14 | — | — | — | — | 4 | 10 | Under 5 5 upwards. | | | |
| | | | | | | | | Under 5 5 upwards. | | | |
| | | | | | | | | Under 5 5 upwards. | | | |
| | | | | | | | | Under 5 5 upwards. | | | |
| | | | | | | | | Under 5 5 upwards. | | | |
| | | | | | | | | Under 5 5 upwards. | | | |
| TOTALS | 116 | 22 | 9 | 10 | 3 | 28 | 44 | Under 5 5 upwards. | | | 5 |

The subjoined numbers have also to be taken into

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|--------------------------------|--|--|--|
| Deaths occurring outside the District among persons belonging thereto..... | — | — | — | — | — | — | — | Under 5 5 upwards. | | | |
| Deaths occurring within the District among persons not belonging thereto..... | — | — | — | — | — | — | — | Under 5 5 upwards. | | | |

District of WESTBOURNE, classified according to Diseases, Ages, and Localities.

MORTALITY FROM SUBJOINED CAUSES, DISTINGUISHING DEATHS OF CHILDREN
UNDER FIVE YEARS OF AGE.

[illegible]

account in judging of the above records of mortality.

(B)—Table of POPULATION, BIRTHS, AND OF NEW CASES OF
of Health, during the year 1892, in the Rural Sanitary District of

| Names of Localities adopted for the purpose of these Statistics; Public Institutions being shown as separate localities. (a) | POPULATION AT ALL AGES. | | Registered Births. (d) | Aged under 5 or over 5. (e) | NEW CASES OF COMING TO THE KNOW OF | | | | |
|---|----------------------------|---|-------------------------------|--|--|---------------------------------|---------------------------------|--|-----------------------------|
| | Census 1891. (b) | Esti- mated to mid- dle of 1892. (c) | | | 1 Small Pox. (f) | 2 Scarlatina. (g) | 3 Diphtheria. (h) | 4 Membranous Group. (i) | 5 Typhus. (j) |
| Funtington Parish..... | 1020 | 1010 | 24 | Under 5 5 upwards. | | | | | |
| Bosham Parish | 1258 | 1260 | 51 | Under 5 5 upwards. | | | 1 2 | | |
| Westbourne Parish | 2269 | 2260 | 60 | Under 5 5 upwards. | | | 1 8 | | |
| Rest of District | 2397 | 2375 | 66 | Under 5 5 upwards. | | | 7 | | |
| Westbourne Workhouse | 140 | 145 | 2 | Under 5 5 upwards. | | | | | |
| | | | | Under 5 5 upwards. | | | | | |
| | | | | Under 5 5 upwards. | | | | | |
| | | | | Under 5 5 upwards. | | | | | |
| | | | | Under 5 5 upwards. | | | | | |
| | | | | Under 5 5 upwards. | | | | | |
| | | | | Under 5 5 upwards. | | | | | |
| TOTALS | 7084 | 7050 | 203 | Under 5 5 upwards. | | | 2 17 | | |

WORTHING
URBAN SANITARY DISTRICT.

pp. 131 et seq.

URBAN SANITARY DISTRICT OF WORTHING.

| | |
|--------------------------------|--------|
| POPULATION IN 1871 | 7,401 |
| " " 1881 | 11,821 |
| " " 1891 | 16,606 |
| AREA IN ACRES | 1,405 |
| NUMBER OF HOUSES IN 1871 | 1,331 |
| " " 1881 | 2,082 |
| " " 1891 | 3,044 |

POPULATION.

The population has increased very rapidly, so that the numbers now are more than twice as numerous as they were twenty years ago. In 1875, part of rural Broadwater in the Newland Road District, with about 600 inhabitants, was added to the urban area. In 1890, West Worthing and the rural part of Heene parish were added to the district when Worthing became a borough, thus causing an increase of 426 acres and nearly 1,700 people. The West Ward now corresponds to the former district of West Worthing, with the addition of 150 persons who lived in rural Heene.

Worthing is an urban area, cut out of the old parish of Broadwater. West Worthing was an urban area cut out of the old parish of Heene; this urban area was rapidly built over, while the rural area remained stationary as regards population; there were only about 30 houses and 150 persons; the whole of Heene parish, urban as well as rural, now forms the West Ward.

Worthing has thus increased its numbers by addition of area as well as by the growth of population.

The figures of these different areas at each census period are here shown :—

| Year. | Total. | Worthing Urban. | West Worthing Urban. | Rural Heene. |
|----------|------------|--------------------|-------------------------|--------------|
| 1871 ... | 7,828 ... | 7,401 ... | 276 ... | 151 |
| 1881 ... | 11,821 ... | 10,976 ... | 689 ... | 156 |
| 1891 ... | 16,606 ... | 14,914 ... | 1,542 ... | 150 |

Thus it will be seen that Worthing Urban District increased by 3,575 between 1871 and 1881, but these figures include the addition of 600 persons by taking in a portion of rural Broadwater. The increase from 1881 to 1891 with no change of area, was 3,938. Rural Heene remained stationary, while in West Worthing district, or Urban Heene, the increase was very rapid, there being nearly six times as many people in 1891 as there were in 1871.

When, on September 3rd, 1890, Worthing became a municipal borough, the whole area was divided into five wards.

The mean number of persons in each house in each ward is here shown :—

| | Houses. | Mean No. of Inmates per House. |
|-----------------------|---------|-----------------------------------|
| 1.—Eastern Ward..... | 515 | 5·4 |
| 2.—Central Ward..... | 1,100 | 5·7 |
| 3.—North-Eastern Ward | 572 | 5·6 |
| 4.—North-Western Ward | 583 | 5·0 |
| 5.—West Ward..... | 274 | 6·1 |
| Total | 3044 | 5·4 |

The West Ward is the least over-crowded of all, as the houses are on the average much larger than in the rest of the district, and a large number of servants are kept ; there are also two schools which increase the average in each house.

The following figures show the number of houses and the number of inhabitants at the census of 1891. The excess of females is well marked, and doubtless this is owing to the number of schools, lodging houses, and private residences, where several female servants are kept. There is, in this district, a vast excess of unmarried females, and thus the birth-rate is low.

| No. | Ward. | Inhabited Houses. | Male. | Female. | Total. |
|-------------|---------------|----------------------|-------|---------|--------|
| 1. | Eastern | 515 | 1171 | 1621 | 2792 |
| 2. | Central | 1100 | 2572 | 3697 | 6269 |
| 3. | North-eastern | 572 | 1283 | 1653 | 2936 |
| 4. | North-western | 583 | 1270 | 1647 | 2917 |
| 5. | West | 274 | 578 | 1114 | 1692 |
| Total | | 3044 | 6874 | 9732 | 16,606 |

BIRTHS AND BIRTH-RATE.

During the year 1892 the births of 386 children were registered; of these 217 were male, and 169 were female.

Estimating the population in the middle of the year at 17,220 the birth-rate was equal to 22·4 per 1,000 persons living, against a rate of 23·4 in 1891.

The rate varies very much in each Ward, and it depends upon the distribution of married women living at the child-bearing ages. For this reason the rate is low in the West Ward, and high in the North-east and North-west Wards.

In each ward the births and birth-rate for 1891 and 1892, are here shown :—

BIRTHS.

| No. | Ward. | Population. | Male. | Female. | Total. | Birth-rate per 1000. | |
|-------------|------------------|-------------|-------|---------|--------|----------------------|-------|
| | | | | | | 1892. | 1891. |
| 1. | Eastern | 2920 | 44 | 19 | 63 | 21·6 | 24·7 |
| 2. | Central | 6310 | 64 | 64 | 128 | 20·3 | 21·2 |
| 3. | North-eastern... | 3050 | 46 | 36 | 82 | 26·9 | 32·0 |
| 4. | North-western | 3130 | 56 | 40 | 96 | 30·7 | 26·1 |
| 5. | West | 1810 | 7 | 10 | 17 | 9·4 | 11·8 |
| Total | | 17220 | 217 | 169 | 386 | 22·4 | 23·4 |

The general birth-rate is low, and it has been steadily declining for the last ten years.

In England and Wales the birth-rate during the year was 30·5 per 1,000 persons living, a rate lower than that recorded in any previous year excepting 1890, and 1·7 per 1,000 below the mean rate in the ten years 1882-91.

It is of interest to compare the variations in the birth-rate during the last ten years under the Local Board, bearing in mind that the addition of the West Ward has slightly helped to lower the rate.

| Year. | Births. | Birth-rate. | Year. | Births. | Birth-rate. |
|----------|---------|-------------|----------|---------|-------------|
| 1881 ... | 324 ... | 29·2 | 1886 ... | 366 ... | 27·7 |
| 1882 ... | 355 ... | 30·7 | 1887 ... | 327 ... | 24·5 |
| 1883 ... | 313 ... | 25·7 | 1888 ... | 322 ... | 23·3 |
| 1884 ... | 352 ... | 27·8 | 1889 ... | 362 ... | 25·6 |
| 1885 ... | 327 ... | 25·0 | 1890 ... | 338 ... | 23·1 |

GENERAL MORTALITY.

There were 239 deaths registered in this district during the year 1892, but to this number must be added the deaths of ten persons belonging to this district in East Preston Workhouse, which is outside the area. From this total number of 249 there must be deducted the death of one person in the Worthing Infirmary, who came from outside the district, leaving a total of 248 deaths.

This number includes the deaths of 34 persons who are reckoned as visitors.

Estimating the population in the middle of the year at 17,220, the death-rate was equal to 14·4 per 1,000 persons living; excluding visitors, the rate was equal to 12·4 per 1000.

The variations in the death-rate in the Local Board District during the ten years previous to 1891 have been as follows :—

| Year. | Deaths. | | Deaths. | |
|-----------|---------------------|---------------------|---------------------|---------------------|
| | Including Visitors. | Excluding Visitors. | Including Visitors. | Excluding Visitors. |
| 1881..... | 170 | 150 | 15·3 | 13·5 |
| 1882..... | 160 | 142 | 13·8 | 12·3 |
| 1883..... | 164 | 151 | 13·4 | 12·4 |
| 1884..... | 205 | 177 | 16·2 | 14·0 |
| 1885..... | 178 | 161 | 13·6 | 12·3 |
| 1886..... | 228 | 210 | 17·2 | 15·9 |
| 1887..... | 231 | 206 | 17·3 | 15·4 |
| 1888..... | 220 | 187 | 15·9 | 13·5 |
| 1889..... | 179 | 145 | 12·6 | 10·2 |
| 1890..... | 218 | 181 | 14·9 | 12·3 |

The following table shows the deaths and death-rate estimated on a population in the middle of the year of 17,220; it includes the deaths of all visitors and the 10 workhouse deaths.

DEATHS.

| No. | Ward. | Population. | Deaths. | | Death-rate per 1000. | |
|------------|---------------|-------------|---------|-------|----------------------|-------|
| | | | 1892. | 1891. | 1892. | 1891. |
| 1. | East..... | 2920 | 28 | 52 | 9·6 | 18·6 |
| 2. | Central..... | 6310 | 103 | 136 | 16·3 | 21·7 |
| 3. | North-eastern | 3050 | 42 | 72 | 13·8 | 24·5 |
| 4. | North-western | 3130 | 49 | 56 | 15·6 | 19·2 |
| 5. | West..... | 1810 | 26 | 25 | 14·4 | 14·8 |
| Total..... | | 17,220 | 248 | 341 | 14·4 | 20·3 |

The mortality in each quarter of the past year is here shown:—

| | Male. | Female. | Deaths. | Total 1890. | Total 1891. |
|---------------------|-------|---------|---------|----------------|----------------|
| First Quarter..... | 40 | 46 | 86 | 61 | 107 |
| Second Quarter..... | 24 | 26 | 50 | 59 | 74 |
| Third Quarter | 26 | 28 | 54 | 50 | 56 |
| Fourth Quarter..... | 24 | 34 | 58 | 65 | 104 |
| Total..... | 114 | 134 | 248 | 235 | 341 |

In each quarter the deaths were as follows:—

| | Under 1 year | 1 to 5 | 5 to 15 | 15 to 25 | 25 to 60 | 60 and upwards. | Total. |
|---------------------|-----------------|--------|---------|----------|----------|--------------------|--------|
| First Quarter..... | 15 | 5 | 4 | 3 | 20 | 39 | 86 |
| Second Quarter..... | 2 | 2 | 1 | 7 | 16 | 22 | 50 |
| Third Quarter | 10 | 6 | — | 6 | 15 | 17 | 54 |
| Fourth Quarter..... | 3 | 1 | 2 | 8 | 19 | 25 | 58 |
| Total..... | 30 | 14 | 7 | 24 | 70 | 103 | 248 |

There have been during the last decade 3,595 births and 2,236 deaths, so that the natural increase of population by excess of births over deaths was 1,359. The actual increase has been 4,785, so that large numbers of people must have migrated into this district during this period.

These figures are arrived at by comparing the population on the present area at the two census periods.

INFANT MORTALITY.

The *infant mortality* is here given as measured by the number of deaths under one year of age to the total number of births in the year :—

| No. | Ward. | Births. | Deaths under one year, | Ratio to 1000 Births. | Ratio in 1891. |
|------------|---------------------|---------|---------------------------|--------------------------|-------------------|
| 1. | Eastern..... | 63 | 2 | 32 | 87 |
| 2. | Central..... | 128 | 14 | 109 | 127 |
| 3. | North-eastern..... | 82 | 4 | 49 | 170 |
| 4. | North-western | 96 | 9 | 95 | 158 |
| 5. | West..... | 17 | 1 | 59 | 200 |
| Total..... | | 386 | 30 | 78 | 140 |

The rate of infant mortality in the Local Board District for the previous ten years was in

| Year. | Ratio. | Year. | Ratio. |
|-------|--------|-------|--------|
| 1881 | 86 | 1886 | 147 |
| 1882 | 95 | 1887 | 100 |
| 1883 | 105 | 1888 | 93 |
| 1884 | 122 | 1889 | 77 |
| 1885 | 88 | 1890 | 136 |

Giving a mean ratio for the decade of 105 deaths to 1,000 births.

The thirty *infantile* deaths included three from diarrhœa, three from hydrocephalus, seven from convulsions, five from lung diseases, one from gastritis, three from debility, and two from atrophy ; six infants were born prematurely.

In England and Wales the proportion of deaths under one year of age to registered births was 148 per 1,000 during the past year, the mean proportion in the preceding ten years being 144.

ZYMOTIC MORTALITY.

The deaths from zymotic diseases were 10 in the case of those which are notifiable, and 4 in the other class where the number of cases cannot be obtained, or a total of 14 deaths in all, with a zymotic mortality of 0·8 per 1,000.

| | Cases. | Deaths. |
|-----------------------|-----------------|---------|
| Small-pox | none | none |
| Scarlatina | 32 | 1 |
| Diphtheria | 13 | 3 |
| Membranous Croup..... | none | none |
| Fever { | Typhus | none |
| | Enteric | 3 |
| | Continued..... | none |
| | Relapsing | none |
| | Puerperal | none |
| | Cholera..... | none |
| | Erysipelas..... | 3 |
| Total | 90 | 10 |

In the other class the deaths were as follows :—

| | Deaths. |
|-------------------------------|---------|
| Measles | 1 |
| Whooping Cough | none |
| Diarrhoea and Dysentery | 3 |
| Rheumatic Fever | none |
| Total | 4 |

The Infectious Disease (Notification) Act, 1889, came into force on August 3rd, 1890. There is no Isolation Hospital in the district.

The Infectious Disease (Prevention) Act, 1890, came into operation on July 4th, 1891.

The Public Health Acts Amendment Act, 1891, came into operation on July 4th, 1891.

The prevalence in each quarter of each infectious disease is shown in the following table :—

| | 1st Qr. | | 2nd Qr. | | 3rd Qr. | | 4th. Qr. | | Year | | Total |
|----------------------|---------|------|---------|------|---------|------|----------|------|-------|------|-------|
| | under | over | under | over | under | over | under | over | under | over | |
| | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| Scarlatina | 1 | 1 | 1 | 4 | 2 | 16 | ... | 7 | 4 | 28 | 32 |
| Diphtheria | ... | ... | ... | 1 | ... | 1 | 1 | 10 | 1 | 12 | 13 |
| Membranous Croup ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Enteric Fever | ... | 16 | 1 | 2 | ... | 2 | ... | ... | 1 | 20 | 21 |
| Puerperal Fever ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | 1 | 1 |
| Erysipelas..... | ... | 5 | ... | 11 | ... | 1 | 1 | 5 | 1 | 22 | 23 |
| Total..... | 1 | 22 | 2 | 18 | 2 | 20 | 2 | 23 | 7 | 83 | 90 |

SCARLATINA appeared in a mild form in various parts of the town, but there was never any epidemic prevalence. The only fatal case was that of a child, 2 years old, who came here on a visit from a house in London, where there had recently been a case of scarlatina. On several other occasions cases were imported, but the disease was limited to the house in which it first appeared.

DIPHThERIA was present in October in a few places. At one private school there were three cases, but there were also nine other children who had the disorder after they had been sent to their own homes, but those who were sent away all recovered, and never spread the disease to anyone else.

The first case occurred just after the holidays, when one of the pupils imported it, as she fell ill just after her return. At another school there were two cases of a mild nature ; the other patients were scattered in private houses.

Isolation was carried out, children in infected houses were not allowed to attend school, and each house was afterwards cleansed and fumigated.

INFLUENZA was prevalent in the first quarter of the year, when it caused fifteen deaths, eight male and seven female.

In the epidemic of 1890, there were no deaths from this cause.

The deaths were chiefly amongst persons above forty years of age.

ENTERIC FEVER.

The following report was made to the Sanitary Committee on March 18th, 1892 :—

Enteric Fever, West Worthing.

Within the last six or seven months several cases of enteric fever have occurred in the West Ward. The first case was met with in Milton Street, as far back as August, 1891 ; in November, 1891, a pupil at a school was attacked ; and in December, 1891, a young man fell ill with the same cause in Brunswick Road ; on January 1st, 1892, two fresh cases were reported in Rowland's Road ; in the middle of that month two more fell ill in a house in The Parade, and one in Belsize Road ; one in Brunswick Road, one more in Milton Street, and one in St. Botolph's Road.

The outbreak then appeared to be over, as no fresh cases were recorded in February. Early this month, however, two fresh cases were reported in Heene Terrace, one in Manor Road, one in Rowland's Road, and another in Belsize Road, where a previous case was recovering.

The behaviour of the epidemic was unusual, for in most outbreaks the cases follow each other in quick succession, but here were persons falling ill at varying and distant periods of time.

An inquiry was at once made into the water supply, the milk supply, and the drainage.

I.—WATER SUPPLY.

The water is drawn from two wells, whence it is pumped twice a day into tanks in each house; the first pumping begins at 6.30 a.m., and ends at 11 a.m., the second pumping begins at 2 p.m. and ends at 5 p.m. There is thus a long interval of more than twelve hours between the evening and the morning supply. The wells are so situated as to preclude any chance of pollution, and the water supplied from them has always been of good quality. A sample was sent to Dr. Dupre, F.R.S., for analysis on January 14th, and he reports that the water is of high organic purity, and does not show the slightest trace of pollution by sewage.

It has all the characteristics of a very pure chalk water, practically uninfluenced by its proximity to the sea.

It appeared improbable that the water should be impure, because the cases were scattered about the ward, and they broke out at such distant intervals.

2.—MILK SUPPLY.

An inquiry into the milk supply led to negative results.

There were 14 houses in which the disease appeared, and they were supplied with milk from at least four different dairies. There was no connection whatever that could be traced between the illness and the milk. There was no disease among the cows of these dairies that I visited, and I am told that during the past winter there has been less disease among cows than usual. Further, the number of persons attacked bore a very small proportion to the number of persons who daily drink milk from these dairies.

3.—DRAINAGE AND SEWAGE.

Each house has been inspected, and although here and there a sanitary defect was met with, the drainage on the whole was found to be in good sanitary condition. The tanks receiving the water were clean, and with one exception, the overflow pipes delivered in the open air. Bath pipes, sink pipes (with one exception), and all waste pipes were cut off from direct connection with the drains and ended in the open air. Each house had one or more closets which were flushed from cisterns, which had no connection with the tank, which supplied water for drinking purposes. The soil pipes were ventilated, but in one case the soil pipe was inside the house.

The sanitary surroundings in each case were good. Some of the houses stood in grounds of their own, and all but two were built within the last twenty-five years, most of them having been erected within the last ten years. There was ample air space around each, and there was no accumulation of filth around any of them, or any dirty surroundings.

There was no seaweed on the beach, for at this season of the year it is not washed in.

The main sewers were flushed regularly, and they have been kept in clean condition.

A clue to the origin of the outbreak was found when some cases of enteric fever were notified at West Tarring early in the year. West Tarring lies north of the West Ward, and it is separated from it by the Brighton Railway. Just north of the railway, a small suburb of new houses has sprung up within the last seven or eight years.

These houses drain into a sewer which connects with the Worthing system, and this is quite distinct from the sewerage system in the West Ward. The water supply to this new suburb is altogether from the West Worthing Waterworks Company, and this is the only point in common between the West Ward and West Tarring.

If now, the cases of disease in these two places owed a common origin, suspicion must fall on the water supply. But it has been shown that the water, as supplied from the waterworks, was of exceptional quality, and therefore there remained the possibility of subsequent contamination, *i.e.*, some source of pollution on its way from the pumping station to the dwelling house.

The general conformation of the ground is such that a ridge of slight elevation runs from east to west parallel to and south of the railway ; it runs from Park Crescent on the east to St. Ronan's on the west. Nearly all the houses in the West Ward lie to the south of this gentle slope. All the houses in West Tarring lie to the north of it.

The waterworks are near Heene Terrace, and therefore they are on the southern side. The water mains follow the contour of the surface, so that they rise about sixteen feet when they reach the ridge, and passing over it, the decline slightly as they extend northwards. Upon the course of the mains numerous hydrants are attached. Each hydrant is fixed in a box and covered with an iron lid furnished with a keyhole, and placed so as the upper surface is level with the road. The hydrant consists of a short length of iron pipe connecting with the main below, and closed by a ball of ebonite which, when the pressure of water is sufficient, is forced against a flange of india-rubber, and so the escape of water is prevented.

This is true so long as there is enough pressure in the pipes, but when the pressure is removed the ball drops down, and then any impurities in the box can pass readily into the main and pollute the water supply. The system adopted in the West Ward is an intermittent, and not a constant one. During the long interval between 5 p.m. of one day and 6 a.m. of the next day, the water in the mains is changing its position.

From the top of the ridge it flows backwards in a southerly direction towards the waterworks, and it flows in a northerly direction towards Tarring on the other side. Thus there are long lines of mains which are empty of water for some hours, and then there is a chance of various impurities entering through the hydrants.

The plans and maps laid before you explain the position of affairs. I have examined, with the aid of the Sanitary Inspector, numerous of these hydrants, on two occasions between 5.30 a.m. and 6.30 a.m., *i.e.*, before the morning pumping had begun, and have found the ball down in every hydrant but three on the mains south of the ridge. The three which contained water were full because they lay lower than the rest, and the water could not get away.

All the water in the mains in the early hours of the morning is water which has been pumped into them the previous day. Many of the boxes were clean, but many were more than half

filled up with dirty mud or silt, which had washed into them off the roads ; often the ebonite balls were covered with dirt. It is obvious that any surface or road filth may thus enter the mains in wet weather, and a person may drink impure water which has been fouled at a distant point.

In dry or frosty weather it is most likely that nothing injurious can enter the pipes, but in wet weather, or when the frost breaks up, there is a certainty that dirty water enters. At West Tarring the condition of Beckett and St. Dunstan's Roads has been very bad, and for weeks pools of stagnant water have been met with. A similar condition of things is to be seen at Thorn's Terrace, which lies close to Milton Street, Brunswick Road, and the Parade. Part of Mill Road and Belsize Road has never been taken over by the authority, and the hydrants in all these roads are especially liable to pollution. The appearance and cessation of these fever cases may, I think, be accounted for by the prevalence of wet or dry weather, upon which the amount of pollution depends.

It is, in my opinion, an urgent matter that the water-mains should be at once thoroughly flushed, and that all dead ends should be well washed out.

That each hydrant box should be carefully cleared.

That all main drains and sewers should be well flushed.

These are immediate measures, but it will be for your authority to take into serious consideration the advisability of giving a constant service of water to the houses in the West Ward, and the adoption of a better form of hydrant, whereby any such pollution can be prevented.

Dr. Dupre's Report.

Report on sample of water received on January 14th, 1892, from Mr. Gardner, Sanitary Inspector for the Borough of Worthing.

Sample contained in a Winchester quart bottle stoppered ; Stopper secured by tape and seal both uninjured ; Bottle labelled "Water from West Worthing Waterworks Company ; Drawn from tap on the mains, January 14th, 1892."

The water is bright, nearly colourless and inodorous : It yields no deposit on standing.

The water is of high organic purity, and does not show the slightest trace of pollution by sewage.

It has all the characteristics of a very pure chalk water, practically uninfluenced by its proximity to the sea. It is perhaps a trifle hard, though by no means to an objectional degree, and becomes soft on boiling.

ANALYTICAL DETAILS.

| | | | | |
|-------------------------|-----|-----|-----|-------------------|
| Appearance | ... | ... | ... | bright |
| Colour | ... | ... | ... | none |
| Smell | ... | ... | ... | none |
| Deposit | ... | ... | ... | none |
| Nitrous Acid | ... | ... | ... | none |
| Phosphoric Acid | ... | ... | ... | slight trace |
| Poisonous Metals | ... | ... | ... | none |
| Hardness before boiling | ... | ... | ... | 18 degrees Clark |
| Hardness after boiling | ... | ... | ... | 4.2 degrees Clark |

Grains per Gallon

| | |
|-----------------------------------|---|
| Oxygen absorbed from permanganate | 0.000 |
| Total dry residue | 25.48 |
| Colour of residue | white |
| Behaviour of residue | { darkens very slightly burns off very readily |
| On ignition | |
| Chlorine | 2.59 |
| Nitric Acid | 1.26 |
| Ammonia | 0.0000 |
| Albumenoid Ammonia | 0.0033 |

PUBLIC ELEMENTARY SCHOOLS.

Early in January I visited, with the Sanitary Inspector, each of the ten Elementary Schools in the Borough.

The report appended gives in detail the chief features of the sanitary circumstances in each school, which may thus be shortly summarized :

WATER SUPPLY.

Nine out of the ten schools are supplied for flushing purposes with Worthing Town water, while Heene Schools are supplied from the waterworks in the West Ward.

The plan commonly adopted is to have one or two large galvanized iron tanks to supply each set of closets. This method secures a good flush, and it prevents any chance of contamination in the public main. In many cases there is a tap in each urinal, which can easily be reached by the children, and so waste of water may ensue. This should be prevented, and care should be taken that no child should draw any drinking water from any tap in a closet or urinal.

WATER CLOSETS.

In no case did we find any cesspools or privies, in some hopper pans were in use, but these were always more or less foul. The trough closets are the best for schools, and such a plan is seen to work well at the Davison and at Holy Trinity Schools. A large flushing tank, emptied twice a day, and under control of the master, prevents waste of water, and gives an efficient flush. In many cases the closets are dark and damp. Light is just as important as ventilation, and in most of the schools more light is required. The inside and outer walls require to be hot lime-washed at intervals, so as to keep them sweet and clean, and the woodwork in all the older schools should be repainted.

In the course of each drain, and between the closet and the main sewer, there should be an intercepting chamber, with an air inlet, and a manhole large enough to enable the drain to be examined and cleaned from time to time.

At the highest point of the drain a ventilating shaft should be carried up to some convenient spot, so as to provide a current of fresh air.

CLOAK-ROOMS AND LOBBIES.

These were generally found to be dirty and dark, and in some cases they were very damp. Care should be taken to have plenty of fresh air and light in such places, and the floor and walls should be smooth and even, so that they can be readily cleansed. The dirty wet clothes of the children hanging on the walls render it important to ensure the greatest cleanliness.

The clothes might in some cases hang on pegs fixed in a moveable wooden frame standing alongside, but away from the wall, but most of the lobbies are too narrow for this purpose. The inside walls should, where necessary, be made good with some hard, impervious material, and they should be hot limewashed at intervals.

TRAPS.

All traps should be placed outside a building, and in each case the waste pipe should deliver on to a short channel leading to a good stoneware gully trap. In many cases the present traps have no sufficient coping, and the pipe, although cut off outside, is so arranged as to cause splashing and dampness of the walls and ground around.

All rainwater pipes should have shoes, so as to deliver the water away from the wall and into a proper gully trap.

This point is constantly neglected, and much dampness of the walls is a consequence. This can be very well seen at the Richmond Road Schools.

REMOVAL OF RUBBISH.

In many cases there was a want of care in keeping the ashpits clean, and in looking after the surface of the ground, where much rubbish was seen, chiefly at the Heene and Christ Church (Boys') School. At the latter there was a heap of brickbats and rubbish in one corner of the playground.

PLAYGROUNDS.

In no case was any shelter provided for the children, unless a small shed at Richmond Road School could be so called. At St. Joseph's and at Graham Road School the space is very small; at the Mission School there is no playground at all. In four other instances the space is large and open, and formed of some hard material covered with beach, and perfectly free from any structure which might afford amusement to children.

At Christ Church Boys' School, the space is small, and the floor is formed of concrete, broken in many places.

At Richmond Road School the space is also small, and the floor is formed of bricks, which in many places are worn into holes.

At the Davison School the paving is formed of asphalte, and the surface is smooth and clean.

I would recommend that each playground should be formed of asphalte, or tar paving, or some similar material; that it should be properly levelled and drained, so that the surface can be kept constantly clean; and that each should be fitted up with some simple appliances for gymnastics or amusement.

A portion of each playground should be covered in, so as to provide a shelter in rough weather ; a lean-to shed against one of the walls might suffice for this purpose.

The walls of the playground might be partly limewashed, so as to give the place a bright and cheerful appearance.

The above points are those which require attention, and they could be carried out in each case without any great expense as they involve very little structural alteration.

WATER SUPPLY.

The condition of the water supply is precisely the same as that detailed in previous reports, so that it need not be here repeated. The water, though good in quality, is deficient in quantity, so that steps are now being taken by the authority to make new headings into the chalk from the bottom of the last made well, when it is expected that an ample supply will be obtained.

The water supply in the old local board district is on the constant system, but often very little water could be obtained at night as the engines pumped at very low pressure so as to economise the supply. In the West Ward the water supply is on the intermittent system, the danger from which has been pointed out above. The company propose to build a reservoir on the Downs to the north of the town, to which water can be pumped from the present works, and whence a constant supply can be given in future.

DRAINAGE AND SEWAGE.

The question of drainage has occupied the attention of the authority during the past year, and the opinion of Mr. Mansergh, C.E., has been taken.

It is proposed to carry the sewage of West Worthing out to the east, so as to have only one outfall.

This scheme will probably be settled early next year.

SYSTEMATIC INSPECTION.

The following shows the work done during the year from the report of Mr. T. C. Gardner, the Sanitary and Water Inspector :—

I beg to submit to your consideration a summary of the work carried out by the directions of your Committee and Medical Officer of Health, also other matters that have received my attention during the year 1892.

PREMISES AND DWELLING HOUSES INSPECTED, VIZ.:—

SLAUGHTER HOUSES.—There are seven, which have been periodically visited and found generally clean.

The improvements mentioned in my last annual report are now made compulsory by the recent Bye-laws, and the necessary steps are being taken to enforce compliance with these Bye-laws.

BUTCHERS' SHOPS.—There are twenty of these, which have been visited and found clean.

MEAT INSPECTION.—The various shops, slaughter-houses, and railway station have been frequently visited to ascertain if there was any meat exposed for sale, or in preparation for sale as human food, unfit for that purpose, and I am glad to state that no such meat was found.

FOOD INSPECTION.—Several tins of salmon and lobster were purchased for examination, and found to be of average quality. The various shops where margarine is sold have been visited, and in each case the requirements of the Margarine Act were found to be complied with.

SALE OF FOOD AND DRUGS ACT.—No samples of food or drugs have been taken under this Act, as no instructions to purchase have been given.

DAIRIES AND MILK SHOPS.—There are twenty milk-sellers registered; the regulations in force within the Borough have been complied with in each case.

COWSHEDS.—There are five within the Borough; they have been frequently visited, and as some do not come up to the standard required by the regulations, notices have been served recently requiring the owners to comply with the regulations.

FISH SHOPS.—There are six, which were inspected and found clean and well kept.

BAKEHOUSES.—There are nineteen within the Borough; they were visited frequently, and limewashed twice during the year. In no case is there a drain within a bakehouse.

SCHOOLS.—The ten Public Elementary Schools were visited; seven of these have complied with the requirements *re* drainage that your Committee ordered and three still remain unaltered; viz., no fresh air inlet to the drains.

COMMON LODGING HOUSES.—There are three registered within the Borough. These have been frequently visited, and found generally clean. They contain a total of fifteen rooms available for sleeping purposes, and for the minimum accommodation of 121 persons nightly.

The occupiers have each been served with a copy of Bye-laws and a number of the prescribed forms for ascertaining the number of lodgers accommodated.

COMPLAINTS.—There were sixty received and enquired into. No complaints *re* seaweed on the foreshore were received.

DISINFECTIONS.—Twenty-five premises were disinfected after illness of an infectious character. In each case the premises were thoroughly cleansed; articles of bedding were destroyed where found necessary; the drains were flushed by the fire hose and disinfected.

UNWHOLESOME HOUSES.—On the certificate of the Medical Officer of Health, four houses were ordered to be cleansed. The notices were complied with in three cases, and in the fourth case the house was closed.

HOUSES UNFIT FOR HUMAN HABITATION.—Eighteen houses were reported as being unfit for human habitation; viz., two in the West, four in the East, and twelve in the Central Ward. With one exception (viz., one house occupied by an aged invalid who cannot be moved), these houses are closed, and a house near the eastern boundary of the Borough was closed by your Committee's recommendation, thus making a total of nineteen closed during the year.

NOTICES SERVED.—There were 256 notices served for the abatement of nuisances, remedying sanitary defects, repairs or alterations to water fittings, cleansing, and disinfecting.

Many nuisances were abated, and improvements effected by verbal request and without notice.

PROCEEDINGS BEFORE THE MAGISTRATES.—Four summonses were taken out, three for closing orders, and one for the abatement of a nuisance. Closing orders were made in two of the former, the other two were withdrawn to enable the defendants to comply with the requirements of the notices.

THE NUISANCES DEALT WITH WERE AS FOLLOWS, VIZ.:—

I. OVERCROWDING.—Seven cases were abated.

2. **ABSENCE OF DUST BINS.**—Twenty-five covered galvanised iron dust bins were provided.

3. **YARDS UNPAVED AND UNDRAINED.**—Twelve cases where a nuisance of this class existed were abated by properly paving and surface draining.

4. **WASTE PIPES OF SINKS, BATHS, AND LAVATORIES CONNECTED WITH THE SEWERS.**—Fifty of these were cut off and made to discharge in the open air on to channels leading to stoneware trapped gullies.

5. **RAIN WATER PIPES CONNECTED WITH THE SEWERS.**—Forty were cut off and made to discharge on to channels leading to trapped stoneware gullies.

6. **DRAINS STOPPED.**—Forty were found to be choked; these were opened up and examined, the defects were remedied and the drains put in good working order.

7. **CESSPOOLS.**—One cottage that was found to be drained into an overflowing cesspool was connected with the public sewer, and the cesspool emptied and cleansed.

8. **OFFENSIVE ACCUMULATIONS.**—Twelve were ordered to be removed, and the notices were complied with in each case.

9. **ANIMALS KEPT SO AS TO BE A NUISANCE.**—Six instances were thus found to exist; the animals were removed or proper accommodation provided.

10. **DRAINS UNVENTILATED.**—Fifty were ventilated by shafts, four inches in diameter, and carried to a safe distance above all windows.

11. **DRAINS WITHOUT FRESH AIR INLETS AND CHAMBERS.**—Forty were provided with intercepting chambers, with fresh air inlets to each.

12. **PREMISES RE-DRAINED.**—Twenty-four houses, where the drains were tested and found defective. The whole of the drainage was re-modelled with water-tight joints, and easy means of access provided.

13. **W.C.'S FOUL AND DEFECTIVE.**—One hundred and fifty were replaced by new pans and traps, or cleansed.

14. **W.C.'S SUPPLIED DIRECT WITH THE MAINS.**—One hundred and twenty that were found supplied in this manner were disconnected and supplied separately by means of syphon flushing cisterns.

15. **SAMPLES OF WATER TAKEN FOR ANALYSIS.**—Eight samples were taken from shallow wells within the Borough, and submitted to the Medical Officer of Health. Five from the East Ward were found to be of indifferent quality, and directly the water main is extended in this locality the owners will be called upon to discontinue the present supply for domestic purposes, and a supply will be laid on from the main.

The other three samples were taken from uncovered wells in the West Ward. One well is abandoned as a domestic supply, and the other two have been provided with covers.

As will be seen by the preceding paragraphs, special attention has been directed to the water supply of the Borough (1), to see that wholesome water is provided to each house, and not contaminated on the premises; (2), that it is not wasted.

The old fittings, known as stool or cottage valves, are now rapidly being replaced by fittings of more modern and substantial pattern, viz., syphon flushing cisterns. These cisterns serve a double purpose, (1), effectual disconnection of w.c. supply from the domestic supply, and, (2), prevention of waste.

Where stop-cocks are fixed outside premises it is an easy matter at midnight to detect waste, *i.e.*, leaky service beyond stop-cock; or taps carelessly left running; but where there is no stop-cock fixed, I find that it is very difficult to detect the locality of leaks, and until each separate premises are provided with this means of detecting defective pipes underground, I am of opinion that there will always be a great amount of water wasted.

INQUESTS were held in 12 cases:—Male, 2 years, accidentally scalded; male, 32 years, suicide by drowning; female, 65 years, accidental fall; male, 65 years, accidental fall; female, 51 years, syncope; male, 21 years, suicide by suffocation with the fumes of burning charcoal; female, 5 hours, asphyxia; male, 2 days, convulsions; female, 70 years, syncope, heart disease; male, 62 years, kidney disease; male, 34 years, suicide by cutting throat; male, 15 years, accidentally drowned.

There was one death returned as “not certified” out of a total of 248 deaths:—Female, 38 years, cancer.

WORTHING URBAN SANITARY DISTRICT.

TABLE 1.—Showing the Deaths at various groups of ages in the ten years, 1883-92.

| Year. | At all Ages. | Under 1 Year. | 1 to 5. | 5 to 15. | 15 to 25. | 25 to 60. | 60 and over. |
|-------------|--------------|---------------|---------|----------|-----------|-----------|--------------|
| 1883..... | 164 | 33 | 22 | 4 | 8 | 51 | 46 |
| 1884..... | 205 | 43 | 13 | 12 | 6 | 61 | 70 |
| 1885..... | 178 | 29 | 20 | 7 | 8 | 44 | 70 |
| 1886..... | 228 | 54 | 43 | 10 | 5 | 57 | 59 |
| 1887..... | 231 | 33 | 18 | 13 | 16 | 57 | 94 |
| 1888..... | 220 | 30 | 28 | 10 | 6 | 64 | 82 |
| 1889..... | 179 | 28 | 15 | 7 | 10 | 50 | 69 |
| 1890..... | 218 | 46 | 18 | 4 | 18 | 51 | 81 |
| 1891..... | 341 | 55 | 44 | 16 | 9 | 92 | 125 |
| 1892.. | 248 | 30 | 14 | 7 | 24 | 70 | 103 |
| Total | 2212 | 381 | 235 | 90 | 110 | 597 | 799 |

WORTHING URBAN SANITARY DISTRICT.

TABLE 2.—Showing the Deaths and Death-rate in each of the ten years, 1883-92, from Zymotic Diseases.

| YEAR. | Small Pox. | Measles. | Scarlatina. | Diphtheria. | Whoop-cough. | Con. Fevers. | | | Diarrhea and Dysentery. | Rheumatic Fever. | Erysipelas. | Pyæmia. | Puerperal Fever. | TOTAL. | Rate per 1000 persons living. |
|-------|------------|----------|-------------|-------------|--------------|--------------|----------|--------|-------------------------|------------------|-------------|---------|------------------|--------|-------------------------------|
| | | | | | | Typhus. | Enteric. | Other. | | | | | | | |
| 1883 | ... | 8 | ... | ... | 1 | ... | 2 | ... | 1 | 3 | ... | ... | ... | 15 | 1·2 |
| 1884 | ... | ... | 2 | 1 | ... | ... | 2 | ... | 9 | ... | 2 | ... | ... | 16 | 1·2 |
| 1885 | ... | 5 | ... | 5 | ... | ... | 3 | ... | 2 | ... | ... | ... | ... | 15 | 1·1 |
| 1886 | ... | 4 | 1 | 1 | 33 | ... | 1 | ... | 15 | ... | ... | ... | ... | 55 | 4·1 |
| 1887 | ... | ... | 1 | 5 | ... | ... | 1 | ... | 4 | ... | ... | 1 | ... | 12 | 0·9 |
| 1888 | ... | ... | 3 | 3 | 11 | ... | ... | ... | ... | ... | 1 | ... | ... | 18 | 1·3 |
| 1889 | ... | ... | ... | 1 | 1 | ... | 2 | ... | ... | 1 | ... | ... | ... | 5 | 0·3 |
| 1890 | ... | 3 | 3 | 1 | 1 | ... | 2 | ... | 3 | 1 | 2 | ... | ... | 16 | 1·0 |
| 1891 | ... | 40 | 1 | ... | 5 | ... | ... | ... | 4 | ... | 2 | ... | 1 | 53 | 3·1 |
| 1892 | ... | 1 | 1 | 3 | ... | ... | 3 | ... | 3 | ... | 3 | ... | ... | 14 | 0·8 |
| Tl. | — | 61 | 12 | 20 | 52 | — | 16 | — | 41 | 5 | 10 | 1 | 1 | 219 | 1·5 |

(A)—Table of DEATHS during the Year 1892, in the Urban Sanitary

| Names of Localities adopted for the purpose of these Statistics; Public Institutions being shown as separate localities. (a) | MORTALITY FROM ALL CAUSES, AT SUBJOINED AGES. | | | | | | | (i) | 1 | 2 | 3 |
|---|--|----------------------|-----------------------|------------------------|-------------------------|-------------------------|------------------------|-----------------------|-------------------|--------------------|--------------------|
| | At all ages. (b) | Under 1 year. (c) | 1 and under 5. (d) | 5 and under 15. (e) | 15 and under 25. (f) | 25 and under 65. (g) | 65 and upwards. (h) | | Small Pox. (i) | Scarlatina. (j) | Diphtheria. (k) |
| East Ward | 24 | 2 | — | 2 | 2 | 9 | 9 | Under 5 5 upwards. | | | 1 |
| Central Ward | 96 | 14 | 5 | 3 | 7 | 33 | 34 | Under 5 5 upwards. | | | 1 |
| North-east Ward | 37 | 4 | 4 | 1 | 4 | 8 | 16 | Under 5 5 upwards. | | | 1 |
| North-west Ward | 43 | 9 | 3 | — | 4 | 14 | 13 | Under 5 5 upwards. | | | |
| West Ward | 24 | 1 | 1 | 1 | 2 | 11 | 8 | Under 5 5 upwards. | | 1 | |
| Worthing Infirmary | 15 | — | 1 | — | 5 | 7 | 2 | Under 5 5 upwards. | | | |
| | | | | | | | | Under 5 5 upwards. | | | |
| | | | | | | | | Under 5 5 upwards. | | | |
| | | | | | | | | Under 5 5 upwards. | | | |
| | | | | | | | | Under 5 5 upwards. | | | |
| TOTALS | 239 | 30 | 14 | 7 | 24 | 82 | 82 | Under 5 5 upwards. | | 1 | 1 2 |
| The subjoined numbers have also to be taken into | | | | | | | | | | | |
| Deaths occurring outside the District among persons belonging thereto..... | 10 | — | — | — | — | 5 | 5 | Under 5 5 upwards. | | | |
| Deaths occurring within the District among persons not belonging thereto..... | 34 | 1 | 1 | 1 | 5 | 13 | 13 | Under 5 5 upwards. | | 1 | 2 |

(B)—Table of POPULATION, BIRTHS, AND OF NEW CASES OF
of Health, during the year 1892, in the Urban Sanitary District of

| Names of Localities adopted for the purpose of these Statistics; Public Institutions being shown as separate localities. (a) | POPULATION AT ALL AGES. | | Registered Births. (d) | Aged under 5 or over 5. (e) | NEW CASES OF COMING TO THE KNOW- LEDGE OF THE LOCALITY. | | | | |
|---|----------------------------|---|-------------------------------|--|--|---------------------------------|---------------------------------|--|-----------------------------|
| | Census 1891. (b) | Esti- mated to mid- dle of 1892. (c) | | | 1 Small Pox. (f) | 2 Scarlatina. (g) | 3 Diphtheria. (h) | 4 Membranous Croup. (i) | 5 Typhus. (j) |
| East Ward | 2767 | 2900 | 63 | Under 5 5 upwards. | | 1 12 | | | |
| Central Ward..... | 6269 | 6310 | 128 | Under 5 5 upwards. | | 2 4 | | | |
| North-east Ward | 2936 | 3050 | 82 | Under 5 5 upwards. | | | 1 2 | | |
| North-west Ward | 2917 | 3130 | 96 | Under 5 5 upwards. | | | | | |
| West Ward... .. | 1692 | 1810 | 17 | Under 5 5 upwards. | | 1 3 | | | |
| Worthing Infirmary | 25 | 20 | | Under 5 5 upwards. | | | | | |
| | | | | Under 5 5 upwards. | | | | | |
| | | | | Under 5 5 upwards. | | | | | |
| | | | | Under 5 5 upwards. | | | | | |
| | | | | Under 5 5 upwards. | | | | | |
| | | | | Under 5 5 upwards. | | | | | |
| TOTALS | 16606 | 17220 | 386 | Under 5 5 upwards. | | 4 28 | 1 12 | | |

INFECTIOUS SICKNESS, coming to the knowledge of the Medical Officer
WORTHING ; classified according to DISEASES, AGES, and LOCALITIES.

[illegible]

LITTLEHAMPTON
URBAN SANITARY DISTRICT.

pp. 159 et seq.

URBAN SANITARY DISTRICT OF LITTLEHAMPTON.

| | |
|--------------------------------|-------|
| POPULATION IN 1871 | 3,266 |
| " " 1881 | 3,926 |
| " " 1891 | 4,452 |
| AREA IN ACRES | 925 |
| NUMBER OF HOUSES IN 1871 | 625 |
| " " 1881 | 743 |
| " " 1891 | 851 |

POPULATION.

The recent census returns show that the population has increased by 526 over the numbers recorded in 1881; in the previous decade the increase was 660. In neither period was the increase so rapid as in the years between 1861 and 1871. In September, 1882, the London, Brighton, and South Coast Railway Company transferred their steamers from this port to Newhaven, and several families left this district in consequence; the loss from this cause may be put down at about 100 persons.

In thirty years the population has become nearly doubled.

| Census. | 1861. | | 1871. | | 1881. | | 1891. |
|---------------|-------|-----|-------|-----|-------|-----|-------|
| Persons | 2350 | ... | 3266 | ... | 3926 | ... | 4452 |
| Increase ... | | ... | 916 | ... | 660 | ... | 526 |

The average number of inmates in each occupied house in each of the last three census years was respectively 5·23, 5·28 and 5·35.

There have been during the past decade 974 births and 574 deaths, so that the natural increase of population by excess of births over deaths was 400. The actual increase is 526, so that there has been a migration of people from other districts into this area.

BIRTHS AND BIRTH-RATE.

During the year 1892 the births of 81 children were registered; of these 45 were male, and 36 were female.

Estimating the population in the middle of the year at 4,500 the birth-rate was equal to 18·0 per 1,000 persons living.

The variations in the birth-rate during the past 10 years have been as follows :—

| Year. | | Births. | | Birth-rate. | Year. | | Births. | | Birth-rate |
|-------|-----|---------|-----|-------------|-------|-----|---------|-----|------------|
| 1883 | ... | 111 | ... | 27·7 | 1888 | ... | 99 | ... | 23·5 |
| 1884 | ... | 98 | ... | 24·5 | 1889 | ... | 104 | ... | 24·4 |
| 1885 | ... | 81 | ... | 19·7 | 1890 | ... | 89 | ... | 20·7 |
| 1886 | ... | 89 | ... | 21·4 | 1891 | ... | 93 | ... | 20·8 |
| 1887 | ... | 116 | ... | 27·7 | 1892 | ... | 81 | ... | 18·0 |

The mean annual number of births is 96, and the mean annual birth-rate is 22·9 per 1,000 persons living.

The birth-rate is very low, and it is now not more than two-thirds of the rate met with in 1875-79, when it was 30·9. Last year it was lower than in any previous period.

In England and Wales the birth-rate during the year was 31·4 per 1,000 persons living, a rate 1·7 per 1,000 below the mean rate in the ten years 1882-91.

GENERAL MORTALITY.

There were 53 deaths registered in this district during the year 1892, but to this number must be added the deaths of 6 persons in the East Preston Workhouse, which is outside the district, making the total of 59 deaths; of these 34 were amongst males, and 25 amongst females.

These 59 deaths include the deaths of 3 visitors.

Estimating the population in the middle of the year at 4,500, the death-rate was equal to 13·1 per 1,000 persons living; in 1890 the mortality was exceptionally low.

In country places throughout England and Wales the mortality in 1892 was equal to 18·1 per 1,000 of population.

The mean annual number of deaths during the last ten years was 56, and the mean annual death-rate is 13·2 per 1000 persons living.

The variations in the death-rate during the past ten years have been as follows :—

| Year. | Deaths. | | Death-rate. | |
|-----------|---------------------|---------------------|---------------------|---------------------|
| | Including Visitors. | Excluding Visitors. | Including Visitors. | Excluding Visitors. |
| 1883..... | 55 | 54 | 13·7 | 13·5 |
| 1884..... | 44 | 41 | 11·0 | 10·2 |
| 1885..... | 47 | 46 | 11·4 | 11·2 |
| 1886..... | 50 | 48 | 12·0 | 11·5 |
| 1887..... | 59 | 51 | 14·1 | 12·2 |
| 1888..... | 58 | 55 | 13·8 | 13·1 |
| 1889..... | 65 | 59 | 15·3 | 13·9 |
| 1890..... | 38 | 37 | 8·8 | 8·6 |
| 1891..... | 84 | 79 | 18·8 | 17·7 |
| 1892..... | 59 | 56 | 13·1 | 12·4 |

Table I. shows that the increased mortality was chiefly due to deaths at sixty years of age and upwards.

In each quarter of the past five years the deaths were thus registered ;

| | 1888. | 1889. | 1890. | 1891. | 1892. | Total. |
|---------------------|-------|-------|-------|-------|-------|--------|
| First Quarter..... | 17 | 14 | 11 | 22 | 17 | 81 |
| Second Quarter..... | 9 | 75 | 7 | 25 | 17 | 73 |
| Third Quarter | 14 | 26 | 9 | 15 | 10 | 74 |
| Fourth Quarter..... | 18 | 10 | 11 | 22 | 15 | 76 |
| | — — | — — | — — | — — | — — | — — |
| Total | 58 | 65 | 38 | 84 | 59 | 304 |

INFANT MORTALITY.

The *infant mortality* is here given as measured by the number of deaths under one year of age to the total number of births in the year :—

| Year. | Births | Deaths under one year | | Ratio to 1000 Births |
|------------|--------|--------------------------|-----|-------------------------|
| 1883 | 111 | ... | 11 | 99 |
| 1884 | 98 | ... | 3 | 30 |
| 1885 | 81 | ... | 4 | 49 |
| 1886 | 89 | ... | 10 | 112 |
| 1887 | 116 | ... | 8 | 69 |
| 1888 | 99 | ... | 10 | 101 |
| 1889 | 104 | ... | 6 | 58 |
| 1890 | 89 | ... | 4 | 45 |
| 1891 | 93 | ... | 10 | 107 |
| 1892 | 81 | ... | 8 | 99 |
| | — — | | — — | — — |
| Mean..... | 96 | | 74 | 77 |

The nine *infantile* deaths included two from diarrhœa, one from tuberculosis, one from enteritis, two from debility, and one from atrophy; one infant was prematurely born.

In England and Wales the proportion of deaths under one year of age to registered births was 148 per 1,000 during the past year, the mean proportion in the preceding ten years being 144.

ZYMOTIC MORTALITY.

The deaths from zymotic diseases were *nil* in the case of those which are notifiable, and 6 in the other class where the number of cases cannot be obtained. The zymotic mortality was at the rate of 1·3 per 1,000.

| | Cases. | Deaths. |
|-----------------------|-----------------|---------|
| Small-pox | none | none |
| Scarlatina | 6 | none |
| Diphtheria | 4 | none |
| Membranous Croup..... | none | none |
| Fever { | Typhus | none |
| | Enteric | none |
| | Continued..... | none |
| | Relapsing | none |
| | Puerperal | none |
| | Cholera... .. | none |
| | Erysipelas..... | none |
| | <hr/> | <hr/> |
| Total | 27 | none |

In the other class the deaths were as follows :—

| | Deaths. |
|------------------------------|---------|
| Measles | 2 |
| Whooping Cough | 1 |
| Diarrhœa and Dysentery | 2 |
| Rheumatic Fever | 1 |
| | <hr/> |
| Total | 6 |

There is no Isolation Hospital in this district.

The Infectious Disease (Notification) Act, 1889, came into operation on March 25th, 1890.

The Infectious Disease (Prevention) Act, 1890, came into operation on March 25th, 1891.

The Public Health Acts Amendment Act, 1871, came into operation on March 25th, 1891.

The prevalence in each quarter of each infectious disease is shown in the following table :—

| | 1st Qr. | | 2nd Qr. | | 3rd Qr. | | 4th Qr. | | Year | | Total |
|---------------------|---------|------|---------|------|---------|------|---------|------|-------|------|-------|
| | under | over | under | over | under | over | under | over | under | over | |
| | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| Scarlatina | ... | ... | ... | ... | 1 | 2 | ... | 3 | 1 | 5 | 6 |
| Diphtheria | ... | ... | ... | ... | ... | 3 | ... | 1 | ... | 4 | 4 |
| Enteric Fever | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... |
| Erysipelas | ... | 1 | 1 | ... | ... | 5 | 2 | 8 | 3 | 14 | 17 |
| | — | — | — | — | — | — | — | — | — | — | — |
| Total | ... | 1 | 1 | ... | 1 | 10 | 2 | 12 | 4 | 23 | 27 |

No cases of small-pox or any other form of fever were notified. All the above cases recovered. In each instance the patient was isolated, and the house was fumigated when the illness ceased.

Table II. shows that during the past ten years 47 deaths have taken place in this class of zymotic disorders.

They were thus distributed :—

| Notifiable diseases. | | Non-notifiable diseases. | |
|-----------------------|------|--------------------------|------|
| Small-pox | 1 | Measles | 7 |
| Scarlatina | none | Whooping-cough | 16 |
| Diphtheria | 2 | Diarrhoea | 13 |
| Enteric Fever ... | none | Rheumatic Fever | 2 |
| Continued Fever | 3 | Ague | none |
| Erysipelas | 3 | | |
| | — | | — |
| | 9 | | 38 |

The last death from scarlet fever occurred as far back as 1878, and the last death from enteric fever was in 1882. Thus it will be seen that the zymotic mortality is very low, and that measles, whooping-cough and diarrhoea account for three-fourths of the deaths in this class.

DEATH-RATES AT DIFFERENT PERIODS.

The works of Water-supply and Sewerage were completed in 1882; before that period the people depended on shallow wells and offensive privies and cesspools. Now there is good water and an efficient system of drainage.

A comparison of the death-rates from various diseases is here given at two periods :—for the seven years before, and for the ten years after, the completion of the works.

| | Seven years—1875-81. | Ten years—1883-92. |
|-------------------------------|----------------------|--------------------|
| General death-rate | 14·42 | ... 13·22 |
| Zymotic death-rate | 1·10 | ... 1·11 |
| Phthisis death-rate | 1·93 | ... 1·33 |
| Lung-disease death-rate | 1·98 | ... 1·96 |

WATER SUPPLY.

A detailed account of the waterworks will be found in my annual reports for 1879, 1888, and 1890, so that it need not be here repeated. The water is of very good quality, so far as chemical analysis can show. It is obtained from fissures in the upper chalk, and hitherto there has always been an abundant supply. Many years ago a well was sunk, and a tube bored about 500 feet into the grey chalk; this was not successful as no gain was obtained by boring so far. The upper chalk with flints is the true source for water, which will be found abundantly in the numerous fissures which are met with in this stratum. The upper chalk is about 80 to 100 feet in depth, and beneath it there is a dense mass of grey chalk, which contains neither flints or fissures, and through which water gradually passes, but without forming any springs or appearing in any volume. Therefore it is of no use to seek for a water supply in the grey chalk.

If a well is made in the upper chalk with flints, and headings are driven horizontally when a depth of 70 or 80 feet is reached, one is sure to come across some fissure whence water can be drawn. When a deep well is sunk in a sandy soil, the water from neighbouring shallow wells is often drained away, and the draining will increase with the depth of the well. This is not the case in the upper chalk, an abundant supply from a fissure 100 feet away will not always effect the other fissure.

By degrees all old wells are being done away with, and last year new water supplies were laid on to 64 houses. About three-fourths of the houses are now supplied from the public mains.

DRAINAGE AND SEWAGE.

A detailed account of the system of sewerage adopted will be found in my annual report for 1888.

All the sewage flows by gravitation into the mouth of the river whence it is carried away to sea,

The sewers are well flushed, and occasionally river water is sent through, so as the more effectually to cleanse them. All new houses are well drained and ventilated in accordance with modern ideas and the model Bye-laws.

SCAVENGING AND CLEANSING.

The work is very well done, and the sanitary surroundings are, as a rule, very good. The streets and pavements are clean, and are kept in very good order.

There is ample air space for all the houses, and the general aspect of the town gives one an idea of neatness and cleanliness.

There are no slums, but some old parts like Hampton Court, Surrey Court and Duke Street require some repairs.

SYSTEMATIC INSPECTION.

The following summary of work done has been given me by Mr. Howard, the Town Surveyor.

| | |
|--|------|
| Number of Inspections | 256 |
| Nuisances met with | 36 |
| Nuisances abated without formal notice ... | 30 |
| Nuisances abated with formal notice | 6 |
| Wells newly dug... .. | none |
| Wells closed | none |
| Wells deepened | none |

No water certificates were granted, as all new houses are now obliged to have the town water laid on.

About 20 new houses are now being built each year.

There are no public baths.

The public elementary schools are well kept.

BYE-LAWS.

Bye-laws are provided for new buildings and streets.

Bye-laws are provided for the removal of snow and filth, etc.

Bye-laws are provided for pleasure boats.

Bye-laws are provided for bathing machines.

Bye-laws are provided for hackney carriages.

Bye-laws are provided for common lodging houses.

Bye-laws are provided for slaughter houses.

Regulations for registering and inspecting Cowsheds and Dairies have been in force since September 1st, 1887.

The seven COWSHEDS and DAIRIES have been well kept.

There is but a small demand for MARGARINE, but when sold the regulations of the Act have been complied with.

The seven BAKEHOUSES have been frequently inspected; they are kept clean and lime-washed at intervals.

The three COMMON LODGING HOUSES have been inspected frequently, and they have been well kept.

The three SLAUGHTER HOUSES have been kept in a satisfactory condition.

There were no cases of overcrowding abated during the year.

No PROCEEDINGS were taken before the Magistrates during the year.

INQUESTS were held in 2 cases :—Female, 81 years, accidental fall; male, 7 months, convulsions.

One death was returned as “not certified” out of a total of 59 deaths :—Male, 48 years, lung disease.

LITTLEHAMPTON URBAN SANITARY DISTRICT.

TABLE 1.—Showing the Deaths at various groups of ages in the ten years, 1883-92.

| Year. | At all Ages. | Under 1 Year. | 1 to 5. | 5 to 15. | 15 to 25. | 25 to 60. | 60 and over. |
|-------------|--------------|---------------|---------|----------|-----------|-----------|--------------|
| 1883..... | 55 | 11 | 2 | 2 | 1 | 15 | 24 |
| 1884..... | 44 | 3 | — | 2 | 5 | 14 | 20 |
| 1885..... | 47 | 4 | 7 | 1 | 2 | 16 | 17 |
| 1886..... | 50 | 10 | 7 | 2 | 1 | 10 | 20 |
| 1887..... | 59 | 8 | 3 | 2 | 5 | 14 | 27 |
| 1888..... | 58 | 10 | 7 | 3 | 3 | 12 | 23 |
| 1889..... | 65 | 6 | 6 | 3 | 3 | 16 | 31 |
| 1890..... | 58 | 4 | 2 | 1 | 5 | 10 | 16 |
| 1891..... | 84 | 10 | 11 | 5 | 2 | 17 | 39 |
| 1892.. | 59 | 9 | 4 | 4 | 2 | 17 | 23 |
| Total | 559 | 75 | 49 | 25 | 29 | 141 | 240 |

TABLE 2.—Showing the Deaths and Death-rate in each of the ten years, 1883-92, from Zymotic Diseases.

| YEAR. | Small Pox. | Measles. | Scarlatina. | Diphtheria. | Whoop-cough. | Con. Fevers. | | | Diarrhoea and Dysentery. | Rheumatic Fever. | Erysipelas. | Pyæmia. | Puerperal Fever. | TOTAL. | Rate per 1000 persons living. |
|-------|------------|----------|-------------|-------------|--------------|--------------|----------|--------|--------------------------|------------------|-------------|---------|------------------|--------|-------------------------------|
| | | | | | | Typhus. | Enteric. | Other. | | | | | | | |
| 1883 | ... | ... | ... | ... | ... | ... | ... | ... | 2 | ... | ... | ... | ... | 2 | 0·5 |
| 1884 | ... | ... | ... | ... | 1 | ... | ... | ... | 1 | ... | 1 | ... | ... | 3 | 0·7 |
| 1885 | ... | 1 | ... | 1 | ... | ... | ... | 3 | 1 | ... | 1 | ... | ... | 7 | 1·7 |
| 1886 | 1 | 2 | ... | ... | 4 | ... | ... | ... | 3 | 1 | ... | ... | ... | 11 | 2·6 |
| 1887 | ... | 1 | ... | ... | 1 | ... | ... | ... | 1 | ... | ... | ... | ... | 3 | 0·7 |
| 1888 | ... | ... | ... | ... | 3 | ... | ... | ... | 2 | ... | ... | ... | ... | 5 | 1·1 |
| 1889 | ... | 1 | ... | 1 | ... | ... | ... | ... | 1 | ... | 1 | ... | ... | 4 | 0·9 |
| 1890 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 0·0 |
| 1891 | ... | ... | ... | ... | 6 | ... | ... | ... | ... | ... | ... | ... | ... | 6 | 1·3 |
| 1892 | ... | 2 | ... | ... | 1 | ... | ... | ... | 2 | 1 | ... | ... | ... | 6 | 1·3 |
| Tl. | 1 | 7 | — | 2 | 16 | — | — | 3 | 13 | 2 | 3 | — | — | 47 | 1·1 |

(A)—Table of DEATHS during the Year 1892, in the Urban Sanitary District

| Names of Localities adopted for the purpose of these Statistics; Public Institutions being shown as separate localities. (a) | MORTALITY FROM ALL CAUSES, AT SUBJOINED AGES. | | | | | | | (i) | 1 | 2 | 3 |
|---|---|----------------------|-----------------------|------------------------|-------------------------|-------------------------|-------------------------|--------------------------------|---------------------|----------------------|----------------------|
| | At all ages. (b) | Under 1 year. (c) | 1 and under 5. (d) | 5 and under 15. (e) | 15 and under 25. (f) | 25 and under 65. (g) | 65 and up-wards. (h) | | Small Pox. | Scarlatina. | Diphtheria. |
| Littlehampton Urban Sanitary District | 53 | 8 | 4 | 4 | 2 | 18 | 17 | Under 5 5 upwards. | ..... | ..... | ..... |
| | | | | | | | | Under 5 5 upwards. | ..... | ..... | ..... |
| | | | | | | | | Under 5 5 upwards. | ..... | ..... | ..... |
| | | | | | | | | Under 5 5 upwards. | ..... | ..... | ..... |
| | | | | | | | | Under 5 5 upwards. | ..... | ..... | ..... |
| | | | | | | | | Under 5 5 upwards. | ..... | ..... | ..... |
| | | | | | | | | Under 5 5 upwards. | ..... | ..... | ..... |
| | | | | | | | | Under 5 5 upwards. | ..... | ..... | ..... |
| | | | | | | | | Under 5 5 upwards. | ..... | ..... | ..... |
| | | | | | | | | Under 5 5 upwards. | ..... | ..... | ..... |
| TOTALS | 53 | 8 | 4 | 4 | 2 | 18 | 17 | Under 5 5 upwards. | ..... | ..... | ..... |

The subjoined numbers have also to be taken into

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|--------------------------------|-------|-------|-------|
| Deaths occurring outside the District among persons belonging thereto..... | 6 | 1 | — | — | — | 2 | 3 | Under 5 5 upwards. | ..... | ..... | ..... |
| Deaths occurring within the District among persons not belonging thereto..... | 3 | 2 | — | — | — | 1 | — | Under 5 5 upwards. | ..... | ..... | ..... |

[illegible][illegible]

(B)—Table of POPULATION, BIRTHS, AND OF NEW CASES OF
of Health, during the year 1892, in the Urban Sanitary District of

| Names of Localities adopted for the purpose of these Statistics; Public Institutions being shown as separate localities. (a) | POPULATION AT ALL AGES. | | Registered Births. (d) | Aged under 5 or over 5. (e) | NEW CASES OF COMING TO THE KNOW- OF | | | | |
|---|----------------------------|---|-------------------------------|--|---|---------------------------------|---------------------------------|--|-----------------------------|
| | Census 1891. (b) | Esti- mated to mid- dle of 1892. (c) | | | 1 Small Pox. (f) | 2 Scarlatina. (g) | 3 Diphtheria. (h) | 4 Membranous Croup. (i) | 5 Typhus. (j) |
| Littlehampton Urban Sanitary District | 4452 | 4500 | 81 | Under 5 5 upwards. | | 1 5 | | | |
| | | | | Under 5 5 upwards. | | | | | |
| | | | | Under 5 5 upwards. | | | | | |
| | | | | Under 5 5 upwards. | | | | | |
| | | | | Under 5 5 upwards. | | | | | |
| | | | | Under 5 5 upwards. | | | | | |
| | | | | Under 5 5 upwards. | | | | | |
| | | | | Under 5 5 upwards. | | | | | |
| | | | | Under 5 5 upwards. | | | | | |
| | | | | Under 5 5 upwards. | | | | | |
| | | | | Under 5 5 upwards. | | | | | |
| TOTALS | 4452 | 4500 | 81 | Under 5 5 upwards. | | 1 5 | | 4 | |

INFECTIOUS SICKNESS, coming to the knowledge of the Medical Officer
LITTLEHAMPTON ; classified according to DISEASES, AGES, and LOCALITIES.

[illegible]

HORSHAM
URBAN SANITARY DISTRICT.

pp. 175 et seq.

URBAN SANITARY DISTRICT OF HORSHAM.

| | | | | | |
|--------------------------|-----|-----|-----|-----|------|
| Population in 1881 | ... | ... | ... | ... | 6784 |
| „ 1891 | ... | ... | ... | ... | 8637 |
| Number of Houses in 1881 | ... | ... | ... | ... | 1396 |
| „ „ 1891 | ... | ... | ... | ... | 1772 |

POPULATION.

The increase in the number of the people during the last intercensal period amounted to 1,763, and this increase is likely to go on for the next few years, as it is an important centre of an agricultural district.

BIRTHS AND BIRTH-RATE.

During the year 1892 the births of 211 children were registered; of these 121 were male, and 90 were female.

Estimating the population in the middle of the year at 8,810 the birth-rate was equal to an annual rate of 23·9 per 1,000 persons living.

The births in the district during the past 10 years have been as follows :—

| Year. | | Births. | | Year. | | Births. |
|-------|-----|---------|-----|-------|-----|---------|
| 1882 | ... | 210 | ... | 1887 | ... | 201 |
| 1883 | ... | 272 | ... | 1888 | ... | 220 |
| 1884 | ... | 247 | ... | 1889 | ... | 236 |
| 1885 | ... | 227 | ... | 1890 | ... | 227 |
| 1886 | ... | 235 | ... | 1891 | ... | 232 |

The mean number of births is 231, so that the birth-rate in 1892 was rather below the average.

In England and Wales the birth-rate during the year was 30·5 per 1,000 persons living, a rate 1·7 per 1,000 below the mean rate in the ten years 1882-91.

GENERAL MORTALITY.

There were 158 deaths registered in this district during the year 1892, but to this number must be added the deaths of 5 persons in Horsham Workhouse which is outside the urban area, leaving the corrected total at 163.

Estimating the population at 8,810, the death-rate was equal to an annual rate of 18·5 per 1,000, a rate much higher than usual, and due to the excessive prevalence of Influenza and lung disease in the first quarter of the year.

In each quarter the deaths were as follows :—

| | Male. | | Female. | | Total. |
|---------------------|-------|-----|---------|-----|--------|
| First Quarter..... | 34 | ... | 44 | ... | 78 |
| Second Quarter..... | 17 | ... | 16 | ... | 33 |
| Third Quarter | 13 | ... | 9 | ... | 22 |
| Fourth Quarter..... | 14 | ... | 16 | ... | 30 |
| | <hr/> | | <hr/> | | <hr/> |
| Year | 78 | ... | 85 | ... | 163 |

Nearly half the deaths occurred in the first three months.

The deaths in the previous ten years were as here shown :—

| Year. | | Deaths. | | Year. | | Deaths. |
|-------|-----|---------|-----|-------|-----|---------|
| 1882 | ... | 116 | ... | 1887 | ... | 110 |
| 1883 | ... | 107 | ... | 1888 | ... | 106 |
| 1884 | ... | 104 | ... | 1889 | ... | 106 |
| 1885 | ... | 108 | ... | 1890 | ... | 131 |
| 1886 | ... | 184 | ... | 1891 | ... | 163 |

In 1886 the high mortality was due to measles and lung diseases.

INFANT MORTALITY.

There were 26 deaths of infants under one year of age, and as there were 211 births, the rate of infant mortality was equal to 123 per 1000, a figure which is high for a district of this kind, the rate for the whole of the combined district being 106.

The twenty-six *infantile* deaths included two from whooping-cough, one from diarrhœa, four from tuberculosis, one from convulsions, nine from lung diseases, one from enteritis, three from debility, and one from marasmus; four infants were born prematurely.

In England and Wales the proportion of deaths under one year of age to registered births was 148 per 1,000 during the past year, the mean proportion in the preceding ten years being 144.

ZYMOTIC MORTALITY.

There were ten deaths in this class of disorders, and of these 4 were from whooping cough, 3 from diarrhœa, 2 from diphtheria, and 1 from rheumatic fever.

The rate was equal to an annual rate of 1·1 per 1,000 persons living.

The sanitary authority have always objected to the Notification of Infectious Disease, and there is no other area in the combined district where the Act of 1889 has not been adopted.

No Isolation Hospital has been provided.

WATER SUPPLY.

The supply originally came from a well situated on the east side of the town. The bench mark on the ordnance map at this spot shows the ground to be 178·9 feet above the sea level. The well is dug 74 feet deep and 8 feet in diameter. There are two 6-inch boreholes 54 feet deep from the bottom of the well. The strata of earth where the well is dug are in the following order:—

| | Feet |
|-------------------------|------|
| Clay | 4 |
| Shrave sandstone | 10 |
| Brown Marl | 46 |
| Sandstone | 8 |
| Blue Marl | 6 |
| Total..... | 74 |

The boreholes pass through the following strata:—

| | Feet | Inches. |
|------------------|------|---------|
| Sand rock | 8 | 0 |
| Blue marl | 20 | 0 |
| Rock | 3 | 0 |
| Blue marl | 18 | 0 |
| Hard rock | 0 | 9 |
| Total..... | 49 | 9 |

Then there is a layer of about nine inches of blue marl overlying some hard rock, and from this thin layer the water is obtained.

It is now proposed to pierce through this second layer of hard rock, and pass through the underlying Grinstead Clay into the Lower Tunbridge Wells Sand, whence it is hoped that a plentiful supply of good water may be obtained.

Mr. Hodson has prepared a long report on the subject, and some extracts from it are here given. The question is a difficult one as there are many flaws in the strata, and a preliminary boring seems necessary.

“The Works were established in the year 1865 by a private company. at a cost of £6,000, and were subsequently purchased by the Local Board for the sum of £7,000.

The works purchased comprised a well sunk 74 feet deep, with two boreholes six inches in diameter, carried 50 feet below the bottom of the well, from which the water was raised over a stand-pipe to a Reservoir adjoining the Engine House, having a capacity of 120,000 gallons, by a horizontal steam engine working two sets of six-inch, three-throw pumps. The water was distributed throughout the Town by cast iron pipes, on the principle of intermittent supply.

Since the date of the purchase, the Local Board have expended further capital on a new well and boreholes, new pumping machinery, certain extensions of mains, and the construction of a new Reservoir of a capacity of 500,000 gallons, and the capital account now stands at about £13,500.

The pumping machinery taken over from the Company is now only used on emergencies. It was very extravagant of fuel, and the pumps were by no means satisfactory; and it may be taken that for some years the supply has been given almost entirely by the new machinery put down by the Local Board.

This machinery consists of a simple expansive horizontal engine and a set of ten-inch three-blow pumps, having a stroke of 18 inches, the engine being by Mr. Abel, of Derby, and the pumps of the manufacture of Messrs. Tangyes, of Birmingham. The engine is a fair type of its class, but if compounded and fitted with a surface condenser, the consumption of fuel might be reduced 25 per cent.

The level of the engine house floor is at about 180 feet above ordnance datum, and the existing wells are sunk to the depth of 74 feet or down to 106 feet above datum, and there are now altogether five six-inch bore holes carried down 54 feet below the bottom of the wells, a total depth from the surface of 128 feet or 52 feet above sea level.

Originally the zone of saturation appears to have been at 47 feet below the surface; but the operations at the works have pumped the water down, and the wells may be considered dry wells, the water being derived entirely from the bore holes, from which it rises and fills a series of chambers of a total capacity of about 60,000 gallons, and these chambers form a store at the commencement of each day's pumping.

It will, however, be seen later on that the presumption is that the night yield is insufficient to fill them during the periods succeeding a long drought.

The information available as to the nature of the ground passed through in the sinking and boring, and as to the yield of the wells at various periods, is very meagre and unreliable; for instance, it is stated that in 1884 the supply was 220,000 gallons per day, equivalent to a consumption of $32\frac{1}{2}$ gallons per head, whilst a little later on it is said that the supply was 253,000 or at the rate of 37 gallons per head. On the 10th May, the new pumps were running at the rate of rather less than ten revolutions per minute; but it was stated that they had run faster earlier in the day, and that the average speed during the entire working day of $14\frac{1}{2}$ hours would be ten revolutions, which would only give a total supply of 130,000 gallons or 14 gallons per head, and taking into account the consumption of towns where water is not required for manufacturing purposes, and the population is of a similar class to that of Horsham, this latter quantity is probably the nearest to the correct one. It appears therefore that the difficulty which has arisen, is due to the gradual exhaustion of the water contained in the thin rock bed, from which the supply is derived, which is being pumped out at a rate in excess of its replenishment by the rainfall upon the limited absorbing ground which it can command.

The Town of Horsham is situate at the extreme western extremity of the formation known as the Upper Tunbridge Wells Beds, which form one of the members of the Wealden Strata.

The sequence of this Strata in your District commencing at the bottom is the Wadhurst Clay, above this come the Lower Tunbridge Wells Sands, next the Grinstead Clay, above this the Upper Tunbridge Wells Sand, with a sub-division known as the

Cuckfield Clay, and above this again is the Weald Clay, which in its upper division contains the beds of Horsham Stone. Above these, but many miles to the North and South respectively, this Weald Clay is overlaid by the Green Sands, the Gault, and the Chalk.

Standing at Horsham and looking due East over St. Leonard's Forest, the whole range of high ground is occupied by the Upper Tunbridge Wells Sand, from which the Weald Clay and the Chalk above, have in past time been denuded, with the exception of traces of the Weald Clay on the summits of the highest hills, and the elevation of this line is due to a main anticlinal or underground roll of the strata ; and a section taken from North to South, extending from the Chalk Cliffs at Dorking to the Chalk Cliffs at Steyning, would show the several measures rising in the form of an arch, the Market Place at Horsham being about a mile to the Southward of the summit, and from this summit the measures previously referred to dip in opposite directions. But in addition to this dip there is also a dip to the South-West, which leaves the Tunbridge Wells beds, forming a kind of promontory surrounded on three sides by the Weald Clay.

This Weald Clay sets in round this promontory, and rapidly increases in thickness to the North, West, and East of Horsham. It is an impervious strata, incapable of absorbing water, and may be at once dismissed from further consideration in relation to your future water supply.

I recommend that the scheme for the construction of the underground chamber should be abandoned, and that a borehole should be carried down through the Lower Tunbridge Wells Sand to the Wadhurst Clay.

This boring may be commenced from the surface or from one of the existing boreholes as may hereafter be determined, the pioneer boring being about four inches in diameter, and so arranged that it can be widened out to ten inches or twelve inches as the indications afforded by the samples of the strata, and the yield of water appear to warrant.

Under the present circumstances, however, I advise that an application should be made to the Local Government Board, for sanction to a loan of £1,000 to pay the cost of borings, and other preliminary work which may be necessary. It is unlikely that this amount will be required, but as sometimes several months elapse between the date of the application for a loan and the sanction being received, the balance will be available for the

prosecution of such works of a permanent nature as may be advised, until sanction is obtained for a second loan, which may upon the information acquired, be estimated upon fairly accurate data."

DRAINAGE AND SEWAGE.

An inquiry was held on December 3rd, 1892, as the Local Board applied to the Local Government Board for sanction to borrow £1,000, for works and water supply, and £1,000 for works of sewage disposal.

This followed on a similar inquiry on August 25th, 1891, to borrow £4,600, for works of sewage disposal. Considerable progress was made during the past year at the sewage works, and on September 6th a stone was laid in connection with the buildings, required to carry out Mr. Baldwin Latham's scheme.

The following is a short summary of the proposed scheme :—

The works are so arranged that the sewage, coming to the works from its present outfall sewer, is thoroughly mixed with the chemicals used by means of a salmon ladder mixer. In connection with this arrangement is a small water mill, with an arrangement for adjusting the amount of chemicals required. After passing this water wheel, the sewage receives an acid chemical, such as sulphate of alumina or sulphate of iron, and then is diverted into one of the three precipitating tanks, which are divided by solid walls into three separate compartments. In the first two of these compartments are timber slides intercepting all the floating matter coming down with the sewage, the fluid dipping under and then passing over the solid wall. The depth of the compartments decreasing, a large portion of the solid matter is precipitated in the first, while in the second and third are intercepted the finer particles, and at the end of the third compartment are two small divisions filled with coke, through which the sewage is made to pass downwards and upwards before proceeding to the filter beds. Coke forms the best filtering material known. The coke having been passed, the sewage falls abruptly into a channel conveying it to one of the filters, built of gravel in the bottom, of various degrees of closeness, then a layer of sand and afterwards a layer of sand and polarite. This material is formed of carbon and iron, and revivifies with intermittent use ; this supplies the final purification before the sewage effluent passes into the streams. The effluent can finally be passed over a small quantity of land belonging to the Board before entering the stream. The sludge from the precipitating tanks will be swept into an underground tunnel, from which it is

pumped by a chain pump within a covered building, and further treated with lime in a mixing well to deprive it of its oleaginous nature and render it capable of pressure. The filter presses then convert about $5\frac{1}{2}$ tons of liquid sludge into about a ton of pressed sludge, which will not undergo decomposition, but rather tend to dry further. In this state, the sludge would be very valuable for heavy clay land.

SYSTEMATIC INSPECTION.

There is no proper inspection of the district.

The Surveyor, who is also the Inspector of Nuisances, has to look after the water works and the sewage farm besides various other town duties.

It is very important in a town of this size that the offices should be separated, as there is much sanitary work which requires to be done.

The chief defects in the town are the want of ventilation in the house drains, the presence of old-fashioned container closets, the insufficiency of the water supply to many closets and the direct connection, in many cases, of the water supply to the closet pan.

Bell traps are very common, and these should be replaced by gully traps. In some cases they are inside the house.

No record of any work done can be recorded, as no register of anything is kept, and it seems a very rare thing for any other than a verbal notice to be given, so as to abate a nuisance.

There are five PUBLIC ELEMENTARY SCHOOLS, which are in a fair condition. In one case, where the trough closet was in use, I found a foul condition of the trough, as the automatic flushing tank was out of order, and had been so for some days.

There are four COMMON LODGING HOUSES, two of which are well kept. One is a very old building and seems to be quite unfit for use.

There are seven SLAUGHTER HOUSES in the district, and these have been inspected during the year and kept fairly.

There are ten COWSHEDS and DAIRIES, but they are nearly all on a small scale, and between 50 and 60 cows are kept altogether.

No PROCEEDINGS were taken before the Magistrates during the year.

No case of OVERCROWDING was either reported or abated.

INQUESTS were held in 4 cases :—Female, 58 years, suicide by drowning; male, 5 months, diarrhœa; female, 15 months, inflammation of the lungs; female, 85 years, heart diseases.

There were no deaths returned as “not certified.”

(A)—Table of DEATHS during the Year 1892, in the Urban Sanitary District

| Names of Localities adopted for the purpose of these Statistics; Public Institutions being shown as separate localities. (a) | MORTALITY FROM ALL CAUSES, AT SUBJOINED AGES. | | | | | | | (i) | 1 | 2 | 3 |
|---|--|----------------------|-----------------------|------------------------|-------------------------|-------------------------|------------------------|--------------------------------|-------------------|-------------|-------------|
| | At all ages. (b) | Under 1 year. (c) | 1 and under 5. (d) | 5 and under 15. (e) | 15 and under 25. (f) | 25 and under 65. (g) | 65 and upwards. (h) | | Small Pox. (i) | Scarlatina. | Diphtheria. |
| Horsham Urban Sanitary District | 158 | 26 | 20 | 6 | 9 | 41 | 56 | Under 5 5 upwards. | | | 2 |
| | | | | | | | | Under 5 5 upwards. | | | |
| | | | | | | | | Under 5 5 upwards. | | | |
| | | | | | | | | Under 5 5 upwards. | | | |
| | | | | | | | | Under 5 5 upwards. | | | |
| | | | | | | | | Under 5 5 upwards. | | | |
| | | | | | | | | Under 5 5 upwards. | | | |
| | | | | | | | | Under 5 5 upwards. | | | |
| | | | | | | | | Under 5 5 upwards. | | | |
| | | | | | | | | Under 5 5 upwards. | | | |
| TOTALS | 158 | 26 | 20 | 6 | 9 | 41 | 56 | Under 5 5 upwards. | | | 2 |

The subjoined numbers have also to be taken into

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|--------------------------------|--|--|--|
| Deaths occurring outside the District among persons belonging thereto..... | 5 | — | — | — | — | 1 | 4 | Under 5 5 upwards. | | | |
| Deaths occurring within the District among persons not belonging thereto..... | — | — | — | — | — | — | — | Under 5 5 upwards. | | | |

of HORSHAM, classified according to Diseases, Ages, and Localities.

MORTALITY FROM SUBJOINED CAUSES, DISTINGUISHING DEATHS OF CHILDREN
UNDER FIVE YEARS OF AGE.

[illegible]

account in judging of the above records of mortality.

[illegible]

(B)—Table of POPULATION, BIRTHS, AND OF NEW CASES OF
of Health, during the year 1892, in the Urban Sanitary District of

| Names of Localities adopted for the purpose of these Statistics; Public Institutions being shown as separate localities. (a) | POPULATION AT ALL AGES. | | Registered Births. (d) | Aged under 5 or over 5. (e) | NEW CASES OF COMING TO THE KNOW- OF | | | | |
|---|----------------------------|---|-------------------------------|--|---|---------------------------------|---------------------------------|--|-----------------------------|
| | Census 1891. (b) | Esti- mated to mid- dle of 1892. (c) | | | 1 Small Pox. (f) | 2 Scarlatina. (g) | 3 Diphtheria. (h) | 4 Membranous Croup. (i) | 5 Typhus. (j) |
| Horsham Urban Sanitary District | 8637 | 8810 | 211 | Under 5 5 upwards. | | | 2 | | |
| | | | | Under 5 5 upwards. | | | | | |
| | | | | Under 5 5 upwards. | | | | | |
| | | | | Under 5 5 upwards. | | | | | |
| | | | | Under 5 5 upwards. | | | | | |
| | | | | Under 5 5 upwards. | | | | | |
| | | | | Under 5 5 upwards. | | | | | |
| | | | | Under 5 5 upwards. | | | | | |
| | | | | Under 5 5 upwards. | | | | | |
| | | | | Under 5 5 upwards. | | | | | |
| | | | | Under 5 5 upwards. | | | | | |
| TOTALS | 8637 | 8810 | 211 | Under 5 5 upwards. | | | 2 | | |

INFECTIOUS SICKNESS, coming to the knowledge of the Medical Officer
HORSHAM ; classified according to DISEASES, AGES, and LOCALITIES.

[illegible]

ARUNDEL
URBAN SANITARY DISTRICT.

pp. 189 et seq.

URBAN SANITARY DISTRICT OF ARUNDEL.

| | |
|--------------------------------|-------|
| POPULATION IN 1871 | 2,956 |
| „ „ 1881 | 2,748 |
| „ „ 1891 | 2,644 |
| AREA IN ACRES | 1,969 |
| NUMBER OF HOUSES IN 1871 | 546 |
| „ „ 1881 | 552 |
| „ „ 1891 | 550 |

POPULATION.

The recent census returns shows a steady decrease during the last twenty years, but the decline in the last decade is less than it was in the previous intercensal period.

BIRTHS AND BIRTH-RATE.

During the year 1892 the births of 69 children were registered; of these 41 were male, and 28 were female.

Estimating the population in the middle of the year at 2,640, the birth-rate was equal to 26.1 per 1,000 persons living.

The variations in the birth-rate during the past 10 years have been as follows :—

| Year. | Births. | Birth-rate. | Year. | Births. | Birth-rate |
|----------|---------|-------------|----------|---------|------------|
| 1883 ... | 71 ... | 25·8 | 1888 ... | 76 ... | 28·1 |
| 1884 ... | 70 ... | 25·4 | 1889 ... | 62 ... | 23·0 |
| 1885 ... | 69 ... | 25·1 | 1890 ... | 79 .. | 29·2 |
| 1886 ... | 66 ... | 23·1 | 1891 ... | 59 ... | 22·3 |
| 1887 ... | 64 ... | 23·2 | 1892 ... | 69 ... | 26·1 |

The mean annual number of births is 68, and the mean annual birth-rate is 25·1 per 1,000 population.

In England and Wales the birth-rate during the year was 30·5 per 1,000 persons living, a rate 1·7 per 1,000 below the mean rate in the ten years 1882-91.

The low birth-rate is in great measure due to the excessive proportion of aged people and to the smaller proportion of married women at the child-bearing ages.

The births are generally most numerous in the first quarter of the year, but this was not the case in 1891 and 1892.

| | 1883-89. | 1890. | 1891. | 1892. | Total. |
|----------------------|----------|-------|-------|-------|--------|
| First Quarter | 140 | 27 | 8 | 16 | 191 |
| Second Quarter | 118 | 14 | 11 | 20 | 163 |
| Third Quarter | 108 | 21 | 22 | 15 | 166 |
| Fourth Quarter | 112 | 17 | 18 | 18 | 165 |
| Total | 478 | 79 | 59 | 69 | 685 |

GENERAL MORTALITY.

There were 44 deaths registered in this district during the year 1892, but to this number must be added the death of one person in the East Preston Workhouse, which is outside the district, so that the total number of deaths amounts to 45; of these 21 were male and 24 were female.

Estimating the population in the middle of the year at 2,640, the death-rate was equal to 17·0 per 1,000 persons living.

In country places throughout England and Wales the mortality in 1892 was equal to 18·1 per 1,000 of population.

The variations in the death-rate during the past ten years have been as follows :—

| Year, | Deaths. | Death-rate, | Year. | Deaths. | Death-rate, |
|----------|---------|-------------|----------|---------|-------------|
| 1883 ... | 45 ... | 16·3 | 1888 ... | 56 ... | 20·7 |
| 1884 ... | 40 ... | 14·5 | 1889 ... | 47 ... | 17·4 |
| 1885 ... | 37 ... | 13·4 | 1890 ... | 70 ... | 25·9 |
| 1886 ... | 42 ... | 15·2 | 1891 ... | 51 ... | 19·3 |
| 1887 ... | 77 ... | 28·0 | 1892 ... | 45 ... | 17·0 |

Thus there have been during the above period 510 deaths, and a mean annual mortality of 18·8 per 1000 of population. During the same period there were 685 births, so that the natural increase of population by excess of births over deaths was 175; there has, however, been a *decrease* of 104, so that a considerable number must have left the district in the past decade.

The number of houses remains nearly stationary, and there is probably less overcrowding than in former years; there were 5·4 inmates to a house in 1871, against 4·9 in 1881, and 4·8 in 1891.

INFANT MORTALITY.

The *infant mortality* is here given as measured by the number of deaths under one year of age to the total number of births in the year :—

| Year. | Births | Deaths under one year | Ratio to 1000 Births |
|------------|--------|--------------------------|-------------------------|
| 1883 | 71 | 6 | 84 |
| 1884 | 70 | 9 | 128 |
| 1885 | 69 | 3 | 43 |
| 1886 | 66 | 6 | 96 |
| 1887 | 64 | 8 | 125 |
| 1888 | 76 | 1 | 13 |
| 1889 | 62 | 9 | 145 |
| 1890 | 79 | 18 | 228 |
| 1891 | 59 | 11 | 186 |
| 1892 | 69 | 4 | 58 |
| Mean..... | 68 | 7·5 | 111 |

The four *infantile* deaths included one from debility; and one from influenza; two infants were born prematurely.

In England and Wales the proportion of deaths under one year of age to registered births was 148 per 1,000 during the past year, the mean proportion in the preceding ten years being 144.

There were no deaths from zymotic diseases during the year.

| | Cases. | Deaths. |
|-----------------------|------------------|---------|
| Small-pox | none | none |
| Scarlatina | 2 | none |
| Diphtheria | 2 | none |
| Membranous Croup..... | none | none |
| Fever { | Typhus | none |
| | Enteric | 2 |
| | Continued..... | none |
| | Relapsing | none |
| | Puerperal | none |
| | Cholera..... | none |
| | Erysipelas | 1 |
| | <hr/> | <hr/> |
| Total | 7 | none |

In the other class the deaths were as follows :—

| | Deaths. |
|------------------------------|---------|
| Measles | none |
| Whooping Cough | none |
| Diarrhœa and Dysentery | none |
| Rheumatic Fever | none |
| | <hr/> |
| Total | none |

There is no Isolation Hospital in this district ; the cottage which was temporarily used for that purpose in 1890 was pulled down early in the year 1891.

The Infectious Disease (Notification) Act, 1889, came into operation on May 13th, 1891.

The Infectious Disease (Prevention) Act, 1890, came into operation on March 16th, 1891.

The Public Health Acts Amendment Act, 1891, came into operation on March 16th, 1891.

The prevalence in each quarter of each notifiable disease is shown in the following table :—

| | 1st Qr. | | 2nd Qr. | | 3rd Qr. | | 4th. Qr. | | Year | | Total |
|---------------------|---------|-------|---------|-------|---------|-------|----------|-------|-------|-------|-------|
| | under | over | under | over | under | over | under | over | under | over | |
| | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | 5 | |
| Scarlatina | ... | ... | 1 | 1 | ... | ... | ... | ... | 1 | 1 | 2 |
| Diphtheria | ... | ... | ... | 1 | ... | 1 | ... | ... | ... | 2 | 2 |
| Enteric Fever | ... | ... | ... | ... | ... | 1 | ... | 1 | ... | 2 | 2 |
| Erysipelas | ... | ... | ... | 1 | ... | ... | ... | ... | ... | 1 | 1 |
| | <hr/> | <hr/> | <hr/> | <hr/> | <hr/> | <hr/> | <hr/> | <hr/> | <hr/> | <hr/> | <hr/> |
| Total..... | .. | ... | 1 | 3 | ... | 2 | ... | 1 | 1 | 6 | 7 |

SCARLATINA appeared in a private house in April, when a child 4 years old, had a mild attack. A second case, also in a private house, fell ill in June. These diseases were contracted from outside sources, and there was no further spread.

DIPHTHERIA attacked one child 11 years old, in June, in a cottage in a hilly part of the town; there was a street gully close to the front door, which was said to be offensive at times. Two younger children, 7 years and $2\frac{1}{2}$ years, were also in the house, but they escaped. The school which the child attended was closed for the Whitsun holidays, from June 3rd to June 13th, and the child fell ill on June 8th. There was no prevalence of sore throats at the school at the time.

The next case occurred at the end of July, in a cottage standing on some low lying land near the river, known as South Marshes. The boy, $3\frac{1}{2}$ years old, was the only one ill, while two younger children escaped. There was no drain or sink in the house, and the hopper closet outside the dwelling was in good order.

ENTERIC FEVER appeared in two houses, and in each case there was no definite cause to be made out.

At the end of August, a young man was taken ill; he lived in a clean and comfortable house with his wife and two children.

In the second house, occupied by a man, wife and eight children, a girl, 8 years old, was attacked on September 26th, but she had been ailing a month previously. In neither house was there a second case.

INFLUENZA caused four deaths in 1892, against two in 1890. One died under one year of age, and three were over sixty-five years of age; two were male and two were female.

There was no high death-rate from lung diseases during the first quarter of the year, as in many other places when influenza is prevalent, so that general mortality was not much raised from this cause; in fact, for the whole year it was lower than in any year since 1886.

MEASLES was somewhat prevalent in July amongst children, but with no fatal result.

WATER SUPPLY.

Much progress has been made during the year in giving a good supply of water to the town.

The Duke of Norfolk has built an engine house near the Swanbourne Lake, in which there are two gas engines to supplement the existing pumping power. A large reservoir on the top of a hill will afford an ample supply of water for the town.

The Duke has also laid water mains, not only in the northern part, but they are carried over the bridge into the southern part of the town.

DRAINAGE AND SEWERAGE.

On April 21st, an inquiry was held by Mr. Arnold Taylor, as the Town Council had applied to the Local Government Board for sanction to borrow £4,000 for works of drainage and sewerage, and the Local Board of Littlehampton had applied to the Board to issue an order determining how much of the tidal waters of the river Arun shall be deemed to be a stream within the meaning of the Rivers Pollution Act, 1876. The questions raised created much interest, and the inhabitants of Littlehampton were strongly opposed to the Arundel scheme. This scheme, proposed by Mr. Barrett, provided for the discharge of the crude sewage by five outfalls into the river Arun, four of such outfalls being on the north side of the river, and one on the south. The loan was to be paid off in four years. The Local Government Board in a letter dated June 24th, objected to this arrangement, and they advised that before its discharge into the river, the sewage from both sides, if possible, but certainly from the north side, should be taken to one outfall, and that the sewage should be strained and treated chemically before being discharged into the river. The Board also advised that the sewage from Arundel Castle should be dealt with in the general sewage system of the borough. But since the additional works would increase the cost of the scheme, the Board was prepared to entertain an application for sanction to a loan of the increased amount, to be repaid within a period of thirty years, in order to lighten the amount to be paid annually out of the borough rate.

Early in September, Mr. Barrett brought forward a second scheme in accordance with the above suggestions, by which it will be seen that a large additional expenditure was needed, and also a considerable annual outlay for pumping. The following is an extract from the report :—

“In accordance with your instructions I have prepared plans embodying the suggestions contained in the letter from the Local

Government Board of the 24th June last. This necessitates the construction of a main intercepting sewer through the lower part of the town, traversing at its upper end, through Shipyard, the course where in the original plan a smaller sewer was proposed. The summit end of this intercepting sewer will be in the High Street near the bridge, falling to Arun Street under public roads or footpaths. Thence powers will have to be obtained to pass through the intervening private property out to the Slipe, where a junction will be effected with the western and north-western districts. Thence I propose to pass, as shewn in an accompanying sheet, to the land tinted red, which I consider a site well adapted for the construction of the proposed sewage disposal works. At the inlet of the intercepting sewer, a chamber and screen are provided for the purpose of arresting any large substance in its passage to the pump sump, whence the sewage is raised about 12 feet, by a centrifugal pump into the pipes for conveyance to the precipitation tanks. On its passage through these delivery pipes the chemicals are mixed, as shewn in plan. I propose three tanks (only two of which will be in use at one time) of the capacity shewn in drawings, keeping the effluent channel up to such a level as will permit of free discharge at any state of the tide in the river, thus avoiding the consequences which might be brought about by such abnormal floods as were experienced last winter. The various and necessary appliances are all provided for the settling tanks and sludge receiver, &c. I have also made provision for a sludge press, which reduces the difficulty of dealing with the sludge to a minimum. The whole is worked by a seven-horse-power gas or oil engine, lifting the sewage in its crude state, and working the chemical mixers and forcing the sludge into press from receiver by compressed air. Estimate of the cost :—I estimate the cost as follows, viz., intercepting sewer (inclusive), £650; sewage disposal works, £1650; total £2,300. This does not include purchase of land for disposal works; nor any compensation and expenses incident, should it be found necessary to resort to statutory powers in the construction of the intercepting sewer through private lands.”

After this, as objections were raised, Mr. Barret prepared revised plans for treating the sewage without any pumping station. By this third scheme there would be two outfalls, one at the Slipe and the other in Arun Street. The sewage would be strained and treated with lime.

The Duke of Norfolk promised to give £1000 towards the original scheme, costing £4000, provided that a system was carried out within four years from August 7th, 1891, and he further offered to pay one-third of any charge beyond that amount if a more expensive scheme were undertaken.

By the end of the year nothing had been done.

SCAVENGING AND CLEANSING.

There is a great want of systematic inspection, and there are many old houses which are hardly fit for habitation, but it is difficult to close them as no new ones can be found. There is indeed a great necessity for increased cottage accommodation in the borough, and to meet this difficulty several cottages have recently been built on land just outside the boundary.

There are seven houses in King Street which have only one dilapidated closet, and there are four houses in Park Place, in a similar condition.

The ashes and house refuse are removed, if the people place their tubs or boxes in the streets on a given day in the week, but accumulations of rubbish in the back yards is often met with.

MARGARINE ACT.

Several grocers sell margarine, and in each case the regulations of the Act have been complied with.

BAKEHOUSES.

There are six in number and they are very well kept. There is no bakehouse on a large scale, and the chief duty is to see that they are frequently cleansed and limewashed. In each case there is a good amount of light and air, and in no instance is there any drain within the building.

SLAUGHTER-HOUSES.

These are five in number, and they are very well kept as regards cleanliness and removal of refuse. The meat in all cases has seemed to be of very good quality.

COMMON LODGING-HOUSES.

These are three in number, but the number of inmates is very small. The houses are very well kept.

COWSHEDS AND DAIRIES.

These are five in number, and they are kept in a very clean condition.

No PROCEEDINGS were taken before the Magistrates during the year.

There was no occasion to condemn meat or any other article of food exposed for sale.

AN INQUEST was held in one case :—Female, 16 hours, natural causes.

There was one death returned as “not certified,” out of a total of 45 deaths :—Female, 52 years, liver disease.

ARUNDEL URBAN SANITARY DISTRICT.

TABLE 1.—Showing the Deaths at various groups of ages in the ten years, 1883-92.

| Year. | At all Ages. | Under 1 Year. | 1 to 5. | 5 to 15. | 15 to 25. | 25 to 60. | 60 and over. |
|-------------|--------------|---------------|---------|----------|-----------|-----------|--------------|
| 1883..... | 45 | 6 | 8 | — | 3 | 10 | 18 |
| 1884..... | 40 | 9 | 5 | 3 | 2 | 10 | 11 |
| 1885..... | 37 | 3 | 4 | 1 | 5 | 9 | 15 |
| 1886..... | 42 | 6 | 3 | 3 | 4 | 14 | 12 |
| 1887..... | 77 | 8 | 7 | 3 | 3 | 28 | 28 |
| 1888..... | 56 | 1 | 13 | 6 | 4 | 16 | 16 |
| 1889..... | 47 | 9 | — | 1 | 4 | 11 | 22 |
| 1890..... | 70 | 18 | 8 | 3 | 6 | 6 | 19 |
| 1891..... | 51 | 11 | 3 | 2 | 1 | 10 | 24 |
| 1892.. | 45 | 4 | 3 | 2 | 3 | 8 | 25 |
| Total | 510 | 75 | 54 | 24 | 35 | 132 | 190 |

TABLE 2.—Showing the Deaths and Death-rate in each of the ten years, 1883-92, from Zymotic Diseases.

| YEAR. | Small Pox. | Measles. | Scarlatina. | Diphtheria. | Whoop-cough. | Con. Fevers. | | | Diarrhoea and Dysentery. | Rheumatic Fever. | Erysipelas. | Pyæmia. | Puerperal Fever. | TOTAL. | Rate per 1000 persons living. |
|-------|------------|----------|-------------|-------------|--------------|--------------|----------|--------|--------------------------|------------------|-------------|---------|------------------|--------|-------------------------------|
| | | | | | | Typhus. | Enteric. | Other. | | | | | | | |
| 1883 | ... | 1 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 1 | 0·3 |
| 1884 | ... | ... | ... | 1 | 1 | ... | ... | ... | 2 | ... | ... | ... | ... | 4 | 1·4 |
| 1885 | ... | ... | ... | ... | ... | ... | ... | ... | 1 | ... | ... | ... | ... | 1 | 0·3 |
| 1886 | ... | ... | ... | 2 | ... | ... | ... | ... | 1 | 1 | ... | ... | ... | 4 | 1·4 |
| 1887 | ... | ... | 2 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | 2 | 0·7 |
| 1888 | ... | ... | 13 | 2 | ... | ... | ... | ... | ... | ... | 1 | ... | 1 | 17 | 6·1 |
| 1889 | ... | ... | ... | 1 | 1 | ... | ... | 1 | ... | ... | ... | ... | ... | 3 | 1·0 |
| 1890 | ... | 1 | 1 | 2 | ... | ... | 11 | ... | 2 | ... | ... | ... | ... | 17 | 6·1 |
| 1891 | ... | ... | ... | ... | 1 | ... | ... | ... | 1 | ... | ... | ... | ... | 2 | 0·7 |
| 1892 | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | ... | — | 0·0 |
| Tl. | — | 2 | 16 | 8 | 3 | — | 11 | 1 | 7 | 1 | 1 | — | 1 | 51 | 2·0 |

(A)—Table of DEATHS during the Year 1892, in the Urban Sanitary District

| Names of Localities adopted for the purpose of these Statistics; Public Institutions being shown as separate localities. (a) | MORTALITY FROM ALL CAUSES, AT SUBJOINED AGES. | | | | | | | (i) | 1 Small Pox. | 2 Scarlatina. | 3 Diphtheria. |
|---|--|----------------------|-----------------------|------------------------|-------------------------|-------------------------|------------------------|--------------------------------|-----------------|------------------|------------------|
| | At all ages. (b) | Under 1 year. (c) | 1 and under 5. (d) | 5 and under 15. (e) | 15 and under 25. (f) | 25 and under 65. (g) | 65 and upwards. (h) | | | | |
| Arundel Urban Sanitary District | 44 | 4 | 3 | 2 | 3 | 8 | 24 | Under 5 5 upwards. | | | |
| | | | | | | | | Under 5 5 upwards. | | | |
| | | | | | | | | Under 5 5 upwards. | | | |
| | | | | | | | | Under 5 5 upwards. | | | |
| | | | | | | | | Under 5 5 upwards. | | | |
| | | | | | | | | Under 5 5 upwards. | | | |
| | | | | | | | | Under 5 5 upwards. | | | |
| | | | | | | | | Under 5 5 upwards. | | | |
| | | | | | | | | Under 5 5 upwards. | | | |
| | | | | | | | | Under 5 5 upwards. | | | |
| TOTALS | 44 | 4 | 3 | 2 | 3 | 8 | 24 | Under 5 5 upwards. | | | |
| The subjoined numbers have also to be taken into | | | | | | | | | | | |
| Deaths occurring outside the District among persons belonging thereto..... | 1 | — | — | — | — | — | 1 | Under 5 5 upwards. | | | |
| Deaths occurring within the District among persons not belonging thereto..... | — | — | — | — | — | — | — | Under 5 5 upwards. | | | |

of ARUNDEL, classified according to Diseases, Ages, and Localities.

MORTALITY FROM SUBJOINED CAUSES, DISTINGUISHING DEATHS OF CHILDREN
UNDER FIVE YEARS OF AGE.

[illegible]

account in judging of the above records of mortality.

| | | | | | | | | | | | | | | | | | | |
|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|--|--|--|---|
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|--|--|--|--|--|--|--|--|--|--|--|--|--|--|---|--|--|--|---|

(B)—Table of POPULATION, BIRTHS, AND OF NEW CASES OF
of Health, during the year 1892, in the Urban Sanitary District of

| Names of Localities adopted for the purpose of these Statistics; Public Institutions being shown as separate localities. (a) | POPULATION AT ALL AGES. | | Registered Births. (d) | Aged under 5 or over 5. (e) | NEW CASES OF COMING TO THE KNOW- OF | | | | |
|---|----------------------------|---|-------------------------------|--|---|---------------------------------|---------------------------------|--|-----------------------------|
| | Census 1891. (b) | Esti- mated to mid- dle of 1892. (c) | | | 1 Small Pox. (f) | 2 Scarlatina. (g) | 3 Diphtheria. (h) | 4 Membranous Croup. (i) | 5 Typhus. (j) |
| Arundel Urban Sanitary District | 2644 | 2640 | 69 | Under 5 5 upwards. | 1 | 1 | 2 | | |
| | | | | Under 5 5 upwards. | | | | | |
| | | | | Under 5 5 upwards. | | | | | |
| | | | | Under 5 5 upwards. | | | | | |
| | | | | Under 5 5 upwards. | | | | | |
| | | | | Under 5 5 upwards. | | | | | |
| | | | | Under 5 5 upwards. | | | | | |
| | | | | Under 5 5 upwards. | | | | | |
| | | | | Under 5 5 upwards. | | | | | |
| | | | | Under 5 5 upwards. | | | | | |
| | | | | Under 5 5 upwards. | | | | | |
| TOTALS | 2644 | 2640 | 69 | Under 5 5 upwards. | 1 | 1 | 2 | | |

INFECTIOUS SICKNESS, coming to the knowledge of the Medical Officer
ARUNDEL; classified according to DISEASES, AGES, and LOCALITIES.

| SICKNESS IN EACH LOCALITY, LEDGE OF THE MEDICAL OFFICER HEALTH. | | | | | | | NUMBER OF SUCH CASES REMOVED FROM THEIR HOMES IN THE SEVERAL LOCALITIES FOR TREATMENT IN ISOLATION HOSPITAL. | | | | | | | | | | | | | | |
|---|------------|------------|------------|----------|-------------|----|--|------------|-------------|-------------|----------------------|---------|------------------------|------------|------------|----------|-------------|----|----|----|------------|
| 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | |
| FEVERS. | | | | Cholera. | Erysipelas. | | | Small Pox. | Scarlatina. | Diphtheria. | Membranous Croup. | FEVERS. | | | | Cholera. | Erysipelas. | | | | |
| Enteric or Typhoid. | Continued. | Relapsing. | Puerperal. | | | | | | | | | Typhus. | Enteric or Typhoid. | Continued. | Relapsing. | | | | | | Puerperal. |
| 2 | | | | | 1 | | | | | | | | | | | | | | | | |
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COMBINED SANITARY DISTRICT.
GENERAL REPORT,

pp. 205 et seq.

GENERAL REPORT

ON THE

HEALTH OF THE COMBINED SANITARY DISTRICT OF WEST SUSSEX.

POPULATION.

The result of the Census, taken on April 6th, 1891, shows that there were 106,476 persons in the combined district, against 88,599 on the same area in 1871, and 97,489 in 1881. Arundel, Midhurst, and Westbourne have joined the combination since 1871, but, for comparative purposes, the population of all the districts in the present area are here given at each of the last three census periods.

| District. | Census 1871 | Census 1881 | Census 1891 |
|------------------------|-------------|-------------|-------------|
| Steyning R. S. D. | 14,060 ... | 16,235 ... | 19,030 |
| Horsham R. S. D. | 14,215 ... | 15,426 ... | 16,248 |
| Petworth R. S. D. | 10,147 ... | 9,594 ... | 9,431 |
| Thakeham R. S. D. | 8,335 ... | 8,285 ... | 8,054 |
| East Preston R. S. D. | 7,680a ... | 8,025a ... | 8,692 |
| Midhurst R. S. D. | 13,042 ... | 13,965 ... | 14,235 |
| Westbourne R. S. D. | 7,221 ... | 7,420 ... | 7,084 |
| Worthing U. S. D. c | 7,677b ... | 11,665b ... | 16,606a |
| Littlehampton U. S. D. | 3,266 ... | 3,926 ... | 4,452 |
| Arundel U. S. D. | 2,956 ... | 2,748 ... | 2,644 |
| Total | 88,599 | 97,489 | 106,476 |

(a) Including Heene. (b) Excluding Heene.

(c) Including West Worthing at each census period.

The increase in 1881 over 1871 was 8,890, and there was a further increase in 1891 over 1881 of 8,987. In the whole period of twenty years the increase amounted to 17,877 persons.

Nearly the whole of this increase took place in urban districts, or in places of an urban character. In seven of such places there was an *increase* in the twenty years of 15,792 persons, and in two urban districts there was a *decrease* of 759 persons during the same period, leaving the total *urban increase* at 15,033. The increase from 1871 to 1881 was 6,228, and there was a further increase of 8,745 from 1881 to 1891. In the last decade the towns grew faster than in the previous decade.

In 124 rural parishes, the *increase* in the twenty years was only 2,844; from 1871 to 1881 the increase was 2,602; while from 1881 to 1891 the increase was only 242. The population in the rural districts was nearly stationary in the last decade.

| Urban District | 1871 to 1881. | 1881 to 1891. | Total increase |
|--------------------------------|---------------|---------------|----------------|
| Worthing increase ... | 3,988 | 4,941 | 8,929 |
| Aldrington ... „ ... | 117 | 2,062 | 2,179 |
| Portslade „ ... | 1,317 | 575 | 1,892 |
| Littlehampton „ ... | 660 | 526 | 1,186 |
| Ifield „ ... | 404 | 774 | 2,178 |
| Southwick ... „ ... | 222 | 3* | 219 |
| Midhurst „ ... | 150 | 59 | 209 |
| <hr/> | | | |
| Total increase | 6,858 | 8,934 | 15,792 |
| *decrease | | | |
| Arundel decrease ... | 208 | 104 | 312 |
| Petworth „ ... | 362 | 85 | 447 |
| <hr/> | | | |
| Total decrease | 570 | 189 | 759 |
| Total urban increase | 6,288 | 8,745 | 15,033 |
| Increase in 124 rural parishes | 2,602 | 242 | 2,844 |
| <hr/> | | | |
| Total increase | 8,890 | 8,987 | 17,877 |

The population in nine urban or semi-urban districts rose from 25,014 in 1871, to 31,302 in 1881, and to 40,047 in 1891.

The population in 124 rural parishes rose from 63,585 in 1871 to 66,187 in 1881 and to 66,429 in 1891.

These figures do not include the urban district of Horsham, which only joined the combination at the end of 1891.

The following statistics are based on a population estimated in the middle of 1892 at 116,370.

The results of the census are disappointing.

In the ten years 1882-91 there were 13,179 more births than deaths, while the increase in the population was only 8,987 from April 1881 to April 1891, so that although the towns grew, there must have been a great exodus amongst the rural population. The birth-rate declined steadily, and so far as numbers are concerned, the diminished births more than cancelled any improvement in the death-rate.

BIRTHS AND BIRTH-RATE.

During the year 1892 the births of 2835 children were registered; of these 1519 were male, and 1316 were female.

| Year. | Population. | Births. | | Total. | Rate per 1,000 |
|-------------|-------------|-----------|-----------|-----------|-------------------|
| | | Male. | Female. | | |
| 1883 ... | 99,400 ... | 1,460 ... | 1,426 ... | 2,886 ... | 29·0 |
| 1884 ... | 100,306 ... | 1,578 ... | 1,455 ... | 3,033 ... | 30·2 |
| 1885 ... | 101,212 ... | 1,456 ... | 1,340 ... | 2,796 ... | 27·6 |
| 1886 ... | 102,118 ... | 1,495 ... | 1,423 ... | 2,918 ... | 28·5 |
| 1887 ... | 103,038 ... | 1,400 ... | 1,367 ... | 2,767 ... | 26·9 |
| 1888 ... | 103,958 ... | 1,437 ... | 1,342 ... | 2,779 ... | 26·7 |
| 1889 ... | 104,878 ... | 1,419 ... | 1,347 ... | 2,766 ... | 26·3 |
| 1890 ... | 105,798 ... | 1,329 ... | 1,229 ... | 2,628 ... | 24·9 |
| 1891 ... | 106,716 ... | 1,444 ... | 1,393 ... | 2,837 ... | 26·6 |
| 1892 ... | 116,370 ... | 1,519 ... | 1,316 ... | 2,835 ... | 24·4 |
| Total | | 14,537 | 13,708 | 28,245 | 27·1 |

The birth-rate shows a gradual decline since 1872, when it was equal to 31·1 per 1000 persons living.

The district is much larger than it was ten years ago, and the population has increased by nearly 12,000 people, yet the actual number of births was less in 1892 than in 1882.

Agricultural depression will not altogether account for this decrease.

This decline is general throughout the country. In England and Wales the birth-rate, which was 33·9 in 1891, gradually sank to 30·2 in 1890, when it reached its lowest point; it rose to 31·4 in the year 1891, and it sank to 30·5 in the year 1892.

The marriage-rate throughout the country reached its lowest point in 1886; it rose to 15·5 in 1890, and to 15·6 in 1891; and it declined to 15·4 in 1892.

In each quarter of the year the births were thus distributed:—

| | Male. | | Female. | | Total. | | Per cent. |
|---------------------|-------|-----|---------|-----|--------|-----|-----------|
| First Quarter | 410 | ... | 300 | ... | 710 | ... | 25·1 |
| Second Quarter ... | 375 | ... | 359 | ... | 734 | ... | 25·8 |
| Third Quarter ... | 379 | ... | 331 | ... | 710 | ... | 25·1 |
| Fourth Quarter ... | 355 | ... | 326 | ... | 681 | ... | 24·0 |
| Total | 1579 | ... | 1316 | ... | 2835 | ... | 100·0 |

Table I shows the male and female births in each quarter of the past ten years; on the whole more boys are born than girls, but in five of the quarters, the female births were in excess of the male births.

GENERAL MORTALITY.

During the year 1892, the deaths of 1,936 persons were registered, and of these 990 were male and 946 were female.

Estimating the population in the middle of the year at 116,370 the death-rate was equal to 16·6 per 1,000 persons living.

| District. | Population. | | Deaths. | | Death-rate. |
|--------------------|-------------|-----|---------|-----|-------------|
| Steyning | 19,340 | ... | 317 | ... | 16·4 |
| Horsham | 16,350 | ... | 289 | ... | 17·7 |
| Petworth | 9,420 | ... | 163 | ... | 17·3 |
| Thakeham | 8,030 | ... | 146 | ... | 18·2 |
| East Preston | 8,750 | ... | 143 | ... | 16·3 |
| Midhurst..... | 14,260 | ... | 247 | ... | 17·3 |
| Westbourne | 7,050 | ... | 116 | ... | 16·4 |
| Worthing | 17,220 | ... | { 248 | ... | 14·4 |
| | | | { 214* | ... | 12·4* |
| Littlehampton ... | 4,500 | ... | { 84 | ... | 13·1 |
| | | | { 56* | ... | 12·4* |
| Arundel | 2,640 | ... | 45 | ... | 17·0 |
| Horsham | 8,810 | ... | 163 | ... | 18·5 |
| Total | 116,370 | | 1,936 | | 16·6 |
| | | | 1,899* | | 16·3* |

* Excluding visitors.

There were 1,918 deaths actually registered in the whole district, but to this number should be added the deaths of 42 persons occurring outside the district among persons belonging thereto; from this total of 1,960 there should be deducted the death of 61 persons occurring within the district among persons not belonging thereto, leaving the total number at 1899. Of these 61 persons, 37 were visitors at Worthing and Littlehampton, while 24 were persons who died in Workhouses, and who came from places not included in the combination. The 37 deaths among visitors added to the above number of 1,899 make a total of 1,936 deaths.

The deaths and corrected death-rate in each of the past ten years are here shown :—

| Year | Population. | Deaths. | | Total. | Rate per 1000 |
|------------|-------------|---------|---------|--------|------------------|
| | | Male. | Female. | | |
| 1883 | 99,400 | 782 | 705 | 1,487 | 14·9 |
| 1884 | 100,306 | 756 | 731 | 1,487 | 14·8 |
| 1885 | 101,212 | 816 | 706 | 1,522 | 15·0 |
| 1886 | 102,118 | 903 | 815 | 1,718 | 16·8 |
| 1887 | 103,038 | 802 | 733 | 1,535 | 14·9 |
| 1888 | 103,958 | 730 | 724 | 1,454 | 13·9 |
| 1889 | 104,878 | 701 | 662 | 1,363 | 13·0 |
| 1890 | 105,798 | 819 | 661 | 1,480 | 13·9 |
| 1891 | 106,716 | 951 | 863 | 1,814 | 17·0 |
| 1892 | 116,370 | 990 | 946 | 1,936 | 16·6 |
| Total..... | | 8,250 | 7,546 | 15,796 | 15·1 |

The death-rate in England and Wales in 1892 was equal to 19·0 per 1,000 persons living, the rate, however, being higher in large towns than in smaller places :—

| | Death-rate in 1892. | Mean, 1883-92. |
|--------------------------------|---------------------|----------------|
| Chief Towns | 19·5 | 20·2 |
| Small Towns & Country Parishes | 18·1 | 17·6 |
| England and Wales | 19·0 | 19·2 |

The following summary shows the changes in the death-rate in various districts during the last eighteen years :—

| | West Sussex. | | Chief Towns. | | Rural Districts. | | England. |
|--------------|--------------|-------|--------------|-------|------------------|-------|----------|
| 1875 | 17·0 | ..... | 24·2 | ..... | 20·7 | ..... | 22·7 |
| 1876-80..... | 15·4 | ..... | 22·4 | ..... | 21·2 | ..... | 20·8 |
| 1881 | 13·9 | ..... | 20·1 | ..... | 16·9 | ..... | 18·9 |
| 1882 | 14·3 | ..... | 21·0 | ..... | 17·3 | ..... | 19·6 |
| 1883 | 14·9 | ..... | 20·7 | ..... | 17·9 | ..... | 19·6 |
| 1884 | 14·8 | ..... | 20·9 | ..... | 17·6 | ..... | 19·7 |
| 1885 | 15·0 | ..... | 20·1 | ..... | 17·8 | ..... | 19·2 |
| 1886 | 16·8 | ..... | 20·4 | ..... | 18·0 | ..... | 19·5 |
| 1887 | 14·9 | ..... | 20·2 | ..... | 17·2 | ..... | 19·1 |
| 1888 | 13·9 | ..... | 19·0 | ..... | 16·6 | ..... | 18·1 |
| 1889 | 13·0 | ..... | 19·3 | ..... | 16·4 | ..... | 18·2 |
| 1890 | 13·9 | ..... | 20·9 | ..... | 17·4 | ..... | 19·5 |
| 1891 | 17·0 | ..... | 21·1 | ..... | 18·5 | ..... | 20·2 |
| 1892 | 16·6 | ..... | 19·5 | ..... | 18·1 | ..... | 19·0 |

In each quarter of the past year the deaths were thus distributed :—

| | Male. | Female. | Total. | Per cent. |
|----------------------|-------|---------|--------|-----------|
| First Quarter | 415 | 394 | 809 | 41·8 |
| Second Quarter | 201 | 177 | 378 | 19·5 |
| Third Quarter..... | 165 | 182 | 347 | 18·0 |
| Fourth Quarter | 209 | 193 | 402 | 20·7 |
| | — | — | — | — |
| Total..... | 990 | 946 | 1,936 | 100·0 |

The enormous increase in the mortality during the first quarter was due to the prevalence of influenza and lung diseases. In this quarter the rural death-rate in England and Wales actually exceeded the urban death-rate.

In each quarter of the previous ten years the deaths were as follows :—

| Year | 1st Qr. | 2nd Qr. | 3rd Qr. | 4th. Qr. | Total |
|-----------|---------|---------|---------|----------|--------|
| 1882..... | 381 | 319 | 329 | 347 | 1,376 |
| 1883..... | 399 | 424 | 322 | 342 | 1,487 |
| 1884..... | 381 | 333 | 383 | 390 | 1,487 |
| 1885..... | 448 | 360 | 345 | 369 | 1,522 |
| 1886..... | 544 | 429 | 373 | 372 | 1,718 |
| 1887..... | 420 | 389 | 338 | 388 | 1,535 |
| 1888..... | 448 | 382 | 307 | 317 | 1,454 |
| 1889..... | 374 | 305 | 337 | 347 | 1,363 |
| 1890..... | 451 | 324 | 309 | 396 | 1,480 |
| 1891..... | 540 | 492 | 343 | 439 | 1,814 |
| Total... | 4,386 | 3,757 | 3,386 | 3,707 | 15,236 |
| Per cent. | 28·8 | 24·7 | 22·2 | 24·3 | 100·0 |

The deaths at different groups of ages in each quarter during the past year were as follows :—

| | Under 1 year | 1 to 5 | 5 to 15 | 15 to 25 | 25 to 60 | 60 and upwards. | Total. |
|---------------------|-----------------|--------|---------|----------|----------|--------------------|--------|
| First Quarter | 118 | 67 | 31 | 32 | 160 | 401 | 809 |
| Second Quarter ... | 59 | 29 | 18 | 21 | 98 | 153 | 378 |
| Third Quarter..... | 61 | 34 | 20 | 22 | 90 | 120 | 347 |
| Fourth Quarter ... | 62 | 34 | 19 | 27 | 96 | 164 | 402 |
| Total | 300 | 164 | 88 | 102 | 444 | 838 | 1936 |

The following table shows the number of deaths in each year at different groups of ages :—

| | All Ages. | Under 1 year. | 1-5. | 5-15 | 15-25. | 25-60. | 60 and over. |
|------------|--------------|------------------|-------|------|--------|--------|-----------------|
| 1881..... | 1,323 | 239 | 99 | 60 | 62 | 320 | 543 |
| 1882..... | 1,376 | 269 | 154 | 81 | 66 | 312 | 494 |
| 1883..... | 1,487 | 255 | 142 | 65 | 78 | 385 | 562 |
| 1884..... | 1,487 | 262 | 137 | 95 | 72 | 368 | 553 |
| 1885..... | 1,522 | 244 | 166 | 71 | 84 | 337 | 620 |
| 1886..... | 1,718 | 328 | 232 | 83 | 69 | 373 | 633 |
| 1887..... | 1,535 | 234 | 112 | 80 | 97 | 368 | 644 |
| 1888..... | 1,454 | 217 | 149 | 72 | 62 | 365 | 589 |
| 1889..... | 1,363 | 213 | 115 | 66 | 69 | 325 | 575 |
| 1890..... | 1,480 | 256 | 110 | 59 | 88 | 331 | 636 |
| Total... | 14,745 | 2,517 | 1,416 | 732 | 747 | 3,484 | 5,849 |
| Per 10,000 | | 1,707 | 960 | 496 | 507 | 2,363 | 3,967 |
| 1891..... | 1,814 | 321 | 186 | 87 | 66 | 376 | 778 |
| 1892 | 1,936 | 300 | 164 | 88 | 102 | 444 | 838 |

INFANT MORTALITY.

During the year 1892 there were 300 deaths of infants under one year of age out of a total of 1,936 deaths from all causes; of these 170 were male and 130 were female.

There were 2,835 births, so that the infant mortality, as measured by the number of deaths under one year of age to every 1,000 children born, was 106, against a rate of 90, 88, 86, 87, 112, 84, 77, 77, 97, and 113, in the ten preceding years.

Throughout England and Wales the rate of infant mortality in 1892 was equal to 148 per 1,000 against 138, 149, 145, 136, 144, 151, and 151 in the seven preceding years. In large towns the infantile death-rate is very much higher.

In each district the rate of infant mortality during the past four years was as follows :—

| | 1889. | | 1890. | | 1891. | | 1892. |
|--------------------|-------|-----|-------|-----|-------|-----|-------|
| Steyning | 66 | ... | 105 | ... | 112 | ... | 131 |
| Horsham | 76 | ... | 112 | ... | 85 | ... | 122 |
| Petworth | 81 | ... | 63 | ... | 119 | .. | 84 |
| Thakeham | 82 | ... | 57 | ... | 112 | ... | 86 |
| East Preston | 88 | ... | 88 | ... | 102 | ... | 93 |
| Midhurst | 66 | ... | 86 | ... | 127 | ... | 107 |
| Westbourne | 69 | ... | 63 | ... | 87 | ... | 108 |
| Worthing | 82 | ... | 135 | ... | 140 | ... | 78 |
| Littlehampton ... | 58 | ... | 45 | ... | 107 | ... | 111 |
| Arundel | 145 | ... | 228 | ... | 186 | ... | 58 |
| Horsham | — | ... | — | ... | — | ... | 123 |
| Mean | 77 | | 97 | | 113 | | 106 |

ZYMOTIC MORTALITY.

Out of 1,936 deaths from all causes in 1892, 141 were due to this class of disorders, or 1·21 per 1,000 persons living.

Table II. shows the mortality from these disorders during the past eleven years, the mean rate for 1881-90 being 1·36 per 1,000 of population.

In England and Wales the rate from the seven principal zymotic disorders was equal to 1·90 per 1,000 persons living, against 1·86, 2·22, 2·14, and 1·90 in the four preceding years.

There were in this district 53 deaths from diseases in 1892, which are notifiable, and 88 deaths in the other class.

| Notifiable. | | Not notifiable. | |
|------------------|-----------------|----------------------|---------|
| Diseases. | Deaths. | Diseases. | Deaths. |
| Small-pox | none | Measles | 12 |
| Scarlatina | 1 | Whooping-cough..... | 49 |
| Diphtheria | 38 | Diarrhœa & Dysentery | 20 |
| Membranous Croup | none | Rheumatic Fever ... | 7 |
| Fever { | Typhus | | |
| | Enteric | | |
| | Continued..... | | |
| | Relapsing | | |
| | Puerperal | | |
| Cholera..... | none | | |
| Erysipelas..... | 8 | | |
| Total | 53 | | 88 |

The Infectious Disease (Notification) Act, 1889, came into operation at various periods in the years 1890 and 1891, and now it is adopted throughout the whole area except in the Urban Sanitary District of Horsham, which only joined the combination at the end of the year 1891.

There is no isolation hospital in the district except the infectious wards in each union workhouse. At Petworth there is a cottage which is occasionally used, and at Hangleton there is a hospital belonging to Hove, into which a few cases from this district can be admitted.

In each quarter the number of new cases notified was as under:—

| | Scarlatina | | Diphtheria | | Membranous Croup. | | Enteric Fever. | | Puerperal Fever. | | Erysipelas. | | Total. | | Total. All Ages. |
|---------------------|------------|-----------|------------|-----------|----------------------|-----------|----------------|-----------|---------------------|-----------|-------------|-----------|------------|-----------|---------------------|
| | under 5 | over 5 | under 5 | over 5 | under 5 | over 5 | under 5 | over 5 | under 5 | over 5 | under 5 | over 5 | under 5 | over 5 | |
| First Quarter..... | 1 | 7 | 3 | 33 | — | 2 | 4 | 28 | — | 1 | — | 14 | 8 | 85 | 93 |
| Second Quarter..... | 5 | 31 | 4 | 36 | — | — | 1 | 17 | — | — | 1 | 19 | 11 | 103 | 114 |
| Third Quarter | 7 | 39 | 3 | 60 | 1 | — | — | 24 | — | — | — | 21 | 11 | 144 | 155 |
| Fourth Quarter..... | 10 | 67 | 5 | 45 | — | — | — | 5 | — | 1 | 3 | 41 | 18 | 159 | 177 |
| Total | 23 | 144 | 15 | 174 | 1 | 2 | 5 | 74 | — | 2 | 4 | 95 | 48 | 491 | 539 |
| Deaths | 1 | — | 11 | 27 | — | — | — | 6 | — | — | — | 8 | 12 | 41 | 53 |

No cases of small-pox, typhus, continued fever or cholera were notified.

SALE OF FOOD AND DRUGS ACT, 1875 and 1879.

Summary of the report of the Public Analyst for the Western Division of the County of Sussex upon the articles analysed by him under the above Acts during the year 1892 :—

First Quarter, ending March 31st, 1892.

No return obtainable.

Second Quarter, ending June 30th, 1892.

| Article. | Result. |
|--------------------------|---|
| Spirits, 17 samples..... | All genuine |
| Milk, 8 samples..... | 7 genuine, 1 adulterated with ten per cent. of water. |
| Butter, 7 samples | All genuine. |

Third Quarter, ending September 30th, 1892.

| Article. | Result. |
|------------------------|---|
| Milk, 14 samples | 10 genuine and of fair quality; 2 poor but passed as genuine; 2 adulterated; 1 skimmed and watered; 1 watered with 10 per cent. of water. |

Fourth Quarter, ending December 31st, 1892.

| Article. | Result. |
|---------------------------|--|
| Butter, 20 samples | 19 genuine, 1 adulterated, consisting entirely of margarine. |
| Spirits, 18 samples | 13 genuine, 5 adulterated with 3, 3, 3, 15, and 23 per cent. of added water. |

The following Table is taken from observations made by W. J. Harris, Esq., F.R. Met. Soc., who has kindly allowed me to make use of them. The facts recorded concern Worthing only:—

| MONTH. | TEMPERATURE. | | | | | | Relative Humidity. | Amount of Cloud. | RAIN. | | |
|-----------------|--------------|-----------|-----------|-----------|-----------|-----------|--------------------|------------------|--------------|--------------|------|
| | MEANS. | | | | | EXTREMES. | | | Amount. | No. of Days. | |
| | 9 a.m. | Min. | Max. | Range. | Mean. | Min. | | | | | Max. |
| | | | | | | | | | | | |
| January. | deg. 36.2 | deg. 31.6 | deg. 41.9 | deg. 10.3 | deg. 36.8 | deg. 21.2 | deg. 51.9 | 6.2 | inches. 0.73 | 10 | |
| February. | 39.2 | 35.1 | 44.6 | 9.5 | 39.8 | 20.2 | 53.2 | 6.0 | 1.20 | 18 | |
| March. | 38.3 | 32.2 | 43.8 | 11.6 | 38.0 | 21.9 | 57.2 | 5.1 | 0.88 | 8 | |
| April. | 48.4 | 37.7 | 55.7 | 18.0 | 46.7 | 25.6 | 69.1 | 3.5 | 1.27 | 7 | |
| May. | 55.1 | 45.0 | 60.5 | 15.5 | 52.8 | 30.6 | 70.1 | 4.8 | 1.27 | 6 | |
| June. | 57.8 | 49.0 | 63.3 | 14.3 | 56.1 | 39.4 | 76.0 | 5.8 | 1.93 | 10 | |
| July. | 60.6 | 51.8 | 66.0 | 14.2 | 58.9 | 45.2 | 75.1 | 6.0 | 2.21 | 11 | |
| August. | 62.7 | 54.1 | 67.8 | 13.7 | 61.0 | 45.2 | 73.7 | 5.7 | 2.46 | 12 | |
| September. | 58.6 | 49.2 | 63.1 | 13.9 | 56.1 | 38.9 | 66.9 | 6.6 | 2.46 | 11 | |
| October. | 47.0 | 40.4 | 53.3 | 12.9 | 46.9 | 28.3 | 58.5 | 6.3 | 4.14 | 21 | |
| November. | 47.2 | 42.2 | 57.5 | 15.3 | 49.9 | 32.9 | 57.8 | 7.1 | 2.88 | 16 | |
| December. | 37.9 | 33.6 | 42.8 | 9.2 | 38.2 | 23.9 | 52.0 | 5.9 | 2.30 | 11 | |
| Year 1892. | 49.1 | 41.8 | 55.0 | 13.2 | 48.4 | 20.2 | 76.0 | 5.8 | 23.73 | 141 | |
| " 1891. | 49.4 | 42.4 | 54.8 | 12.2 | 48.4 | 16.5 | 77.0 | 5.9 | 29.86 | 172 | |
| " 1890. | 49.4 | 42.2 | 54.6 | 12.4 | 48.4 | 14.9 | 78.0 | 6.2 | 22.84 | 149 | |
| " 1889. | 49.5 | 42.7 | 54.8 | 12.1 | 48.8 | 21.9 | 81.5 | 6.4 | 23.92 | 159 | |
| " 1888. | 48.0 | 42.4 | 53.3 | 10.9 | 47.8 | 20.2 | 78.8 | 6.4 | 25.88 | 181 | |
| " 1887. | 48.4 | 41.6 | 54.1 | 12.5 | 47.9 | 17.4 | 82.0 | 5.7 | 21.28 | 137 | |
| " 1886. | 50.0 | 44.0 | 55.2 | 11.2 | 49.6 | 23.2 | 78.0 | 5.8 | 31.89 | 164 | |
| " 1885. | 50.0 | 43.7 | 55.1 | 11.4 | 49.4 | 25.2 | 81.7 | 5.7 | 28.09 | 156 | |
| " 1884. | 52.0 | 45.6 | 56.8 | 11.2 | 51.2 | 27.0 | 83.3 | 5.8 | 23.51 | 126 | |
| " 1883. | 50.7 | 43.9 | 55.9 | 12.0 | 49.9 | 23.3 | 75.7 | 5.7 | 26.05 | 174 | |

THE TEMPERATURE OF THE SOIL.

The temperature of the soil at 9 a.m., one foot below the surface of the ground at Worthing, has been taken daily by W. J. Harris, Esq., F. R. Met. Soc., and the results for each month for 1892, and also for a term of years, are here given :—

| | 1892 | | | 1886. | 1887. | 1888. | 1889. | 1890. | 1891. |
|----------|-------|------|------|-------|-------|-------|-------|-------|-------|
| | Mean. | Max. | Min. | Mean. | Mean. | Mean. | Mean. | Mean. | Mean. |
| Jan. ... | 37·5 | 42·8 | 34·4 | 37·7 | 37·3 | 38·3 | 39·3 | 42·7 | 35·1 |
| Feb. ... | 40·4 | 43·2 | 35·9 | 36·7 | 39·2 | 37·2 | 38·7 | 40·1 | 39·3 |
| March | 39·6 | 45·8 | 35·3 | 39·1 | 40·3 | 39·0 | 40·6 | 42·6 | 40·6 |
| April | 47·1 | 51·9 | 41·9 | 48·1 | 45·2 | 44·0 | 47·2 | 47·3 | 45·1 |
| May ... | 53·1 | 60·2 | 46·9 | 55·1 | 55·1 | 52·2 | 56·6 | 55·8 | 52·6 |
| June... | 59·8 | 65·0 | 56·9 | 60·4 | 59·4 | 58·0 | 62·5 | 58·6 | 56·9 |
| July ... | 61·6 | 63·8 | 57·9 | 64·1 | 64·4 | 60·1 | 62·7 | 60·3 | 62·1 |
| Aug.... | 62·7 | 65·3 | 60·7 | 63·8 | 63·1 | 60·9 | 61·0 | 61·2 | 60·6 |
| Sept.... | 58·6 | 60·8 | 55·4 | 61·6 | 57·2 | 58·4 | 58·6 | 59·9 | 59·7 |
| Oct. ... | 48·7 | 57·2 | 42·7 | 54·2 | 49·9 | 49·8 | 51·5 | 52·3 | 53·8 |
| Nov.... | 47·5 | 51·8 | 36·9 | 47·1 | 44·4 | 49·0 | 47·2 | 49·9 | 48·8 |
| Dec.... | 40·1 | 44·9 | 35·0 | 36·0 | 40·2 | 44·2 | 40·5 | 36·0 | 42·6 |
| Year | 49·9 | 65·3 | 34·4 | 50·6 | 49·3 | 49·3 | 50·5 | 50·3 | 48·9 |

| | Mean. | Max. | Min. |
|---------------|-------|------|------|
| In 1885 | 50·8 | 67·2 | 36·1 |
| In 1886 | 50·6 | 67·2 | 34·3 |
| In 1887 | 49·3 | 67·2 | 35·0 |
| In 1888 | 49·3 | 64·2 | 34·6 |
| In 1889 | 50·5 | 65·9 | 35·3 |
| In 1890 | 50·3 | 67·8 | 33·8 |
| In 1891 | 48·9 | 65·4 | 32·4 |
| In 1892 | 49·9 | 65·3 | 34·4 |

TABLE I.—Showing the Births and Birth-rate in 1883-92.

| DISTRICT. | FIRST QUARTER. | | | SECOND QUARTER. | | | THIRD QUARTER. | | | FOURTH QUARTER. | | | YEAR. | | | Rate per 1,000. |
|-----------|----------------|-----|-------|-----------------|-----|-------|----------------|-----|-------|-----------------|-----|-------|-------|------|--------|-----------------------|
| | M. | F. | TL. | M. | F. | TL. | M. | F. | TL. | M. | F. | TL. | M. | F. | TL. | |
| 1883..... | 391 | 381 | — 772 | 358 | 353 | — 711 | 367 | 359 | — 726 | 344 | 333 | — 677 | 1460 | 1426 | — 2886 | 29·03 |
| 1884..... | 374 | 371 | — 745 | 431 | 358 | — 789 | 370 | 356 | — 726 | 403 | 370 | — 773 | 1578 | 1455 | — 3033 | 30·23 |
| 1885..... | 402 | 367 | — 769 | 332 | 323 | — 655 | 371 | 314 | — 685 | 351 | 336 | — 687 | 1456 | 1340 | — 2796 | 27·62 |
| 1886..... | 397 | 386 | — 783 | 404 | 370 | — 774 | 350 | 342 | — 692 | 344 | 325 | — 669 | 1495 | 1423 | — 2918 | 28·57 |
| 1887..... | 337 | 322 | — 659 | 349 | 343 | — 692 | 369 | 336 | — 705 | 345 | 366 | — 711 | 1400 | 1367 | — 2767 | 26·95 |
| 1888..... | 360 | 346 | — 706 | 409 | 374 | — 783 | 323 | 319 | — 642 | 345 | 303 | — 648 | 1437 | 1342 | — 2779 | 26·73 |
| 1889..... | 329 | 346 | — 675 | 371 | 332 | — 703 | 360 | 334 | — 694 | 359 | 335 | — 694 | 1419 | 1347 | — 2766 | 26·37 |
| 1890..... | 353 | 329 | — 682 | 307 | 311 | — 618 | 331 | 320 | — 651 | 338 | 339 | — 677 | 1329 | 1299 | — 2628 | 24·88 |
| 1891..... | 333 | 360 | — 693 | 394 | 359 | — 753 | 374 | 339 | — 713 | 343 | 335 | — 678 | 1444 | 1393 | — 2837 | 26·58 |
| 1892..... | 410 | 300 | — 710 | 375 | 359 | — 734 | 379 | 330 | — 710 | 355 | 326 | — 681 | 1519 | 1316 | — 2835 | 24·36 |

TABLE II.—Showing the Deaths and Death-rate from Zymotic Diseases in each of the years, 1881-90, and in 1891-92.

| Year. | Small Pox. | Measles. | Scarlatina. | Diphtheria. | Whooping Cough | Cont. Fevers. | | | Diarrhoea. | Rheumatic Fever. | Erysipelas. | Pyæmia. | Puerperal Fever. | Total. | Rate per 1,000 persons living. | Population. |
|-------------|------------|----------|-------------|-------------|----------------|---------------|----------|--------|------------|------------------|-------------|---------|------------------|--------|--------------------------------|-------------|
| | | | | | | Typhus. | Enteric. | Other. | | | | | | | | |
| 1881..... | 1 | 1 | 15 | 25 | 10 | ... | 12 | 1 | 17 | 7 | 7 | 2 | 5 | 103 | 1·08 | 94,841 |
| 1882..... | ... | 16 | 15 | 35 | 53 | ... | 10 | 3 | 19 | 4 | 7 | 1 | 1 | 164 | 1·71 | 95,746 |
| 1883..... | 5 | 21 | 13 | 24 | 13 | 1 | 18 | ... | 23 | 6 | 5 | ... | 2 | 131 | 1·32 | 99,400 |
| 1884..... | ... | 5 | 22 | 32 | 14 | 2 | 12 | ... | 38 | ... | 11 | 3 | 4 | 143 | 1·42 | 100,306 |
| 1885..... | 1 | 12 | 15 | 41 | 24 | 2 | 17 | 4 | 23 | 3 | 10 | ... | ... | 152 | 1·50 | 101,212 |
| 1886..... | 3 | 45 | 9 | 23 | 88 | 1 | 20 | ... | 54 | 3 | 4 | 2 | 4 | 256 | 2·51 | 102,118 |
| 1887..... | ... | 3 | 11 | 19 | 4 | 2 | 14 | 2 | 37 | 3 | 3 | 3 | ... | 101 | 0·98 | 103,038 |
| 1888..... | ... | 4 | 22 | 23 | 51 | ... | 3 | ... | 15 | ... | 8 | 1 | 4 | 131 | 1·26 | 103,958 |
| 1889..... | ... | 7 | 1 | 25 | 26 | ... | 10 | 1 | 11 | 7 | 3 | 1 | ... | 92 | 0·88 | 104,878 |
| 1890..... | ... | 12 | 6 | 12 | 22 | 1 | 22 | ... | 24 | 2 | 3 | ... | 1 | 105 | 0·99 | 105,798 |
| Total | 10 | 126 | 129 | 259 | 305 | 9 | 138 | 11 | 261 | 35 | 61 | 13 | 21 | 1378 | 1·36 | 106,716 |
| In 1891 | ... | 54 | 3 | †22 | 46 | ... | 7 | ... | 18 | 6 | 5 | ... | 2 | 163 | 1·53 | 106,716 |
| In 1892 | ... | 12 | 1 | 38 | 49 | ... | 6 | ... | 20 | 7 | 8 | ... | ... | 141 | 1·21 | 116,370 |

†Including one from membranous croup.

TABLE III.—Showing the Deaths in each Month in the ten years 1881-90, and in 1891-92.

| Month. | 1881 | 1882 | 1883 | 1884 | 1885 | 1886 | 1887 | 1888 | 1889 | 1890 | Total. | 1891 | 1892 |
|---------------|------|------|------|------|------|------|------|------|------|------|--------|------|------|
| January | 125 | 132 | 127 | 117 | 182 | 155 | 130 | 135 | 108 | 149 | 1360 | 210 | 394 |
| February ... | 118 | 108 | 118 | 124 | 151 | 185 | 120 | 142 | 125 | 151 | 1342 | 164 | 219 |
| March | 126 | 141 | 154 | 140 | 115 | 204 | 170 | 171 | 141 | 151 | 1513 | 166 | 196 |
| April | 131 | 98 | 148 | 118 | 129 | 168 | 126 | 142 | 135 | 122 | 1317 | 173 | 132 |
| May | 117 | 118 | 137 | 101 | 130 | 140 | 144 | 137 | 98 | 121 | 1243 | 159 | 124 |
| June | 106 | 103 | 139 | 114 | 101 | 121 | 119 | 103 | 72 | 81 | 1059 | 160 | 122 |
| July | 93 | 100 | 107 | 116 | 117 | 111 | 112 | 97 | 116 | 104 | 1073 | 116 | 101 |
| August | 110 | 112 | 108 | 147 | 112 | 131 | 111 | 115 | 102 | 101 | 1149 | 114 | 112 |
| September... | 104 | 117 | 107 | 120 | 116 | 131 | 115 | 95 | 119 | 104 | 1128 | 113 | 134 |
| October | 109 | 100 | 104 | 125 | 97 | 105 | 136 | 125 | 113 | 109 | 1123 | 119 | 152 |
| November ... | 98 | 116 | 125 | 121 | 130 | 116 | 118 | 99 | 103 | 126 | 1152 | 136 | 112 |
| December ... | 86 | 131 | 113 | 144 | 142 | 151 | 134 | 93 | 131 | 161 | 1286 | 184 | 138 |
| Year | 1323 | 1376 | 1487 | 1487 | 1522 | 1718 | 1535 | 1454 | 1363 | 1480 | 14745 | 1814 | 1936 |

TABLE IV.—Showing the Deaths and Death-rate from all causes and from various causes in the ten years, 1881-90, and in 1891-92.

| Year. | Annual Number of Deaths. | | | | | Population in the middle of the year. | Annual Rate per 100,000 living. | | | | |
|-------------|--------------------------|------------------|-----------|--------------|----------------|---------------------------------------|---------------------------------|-----------------|-----------|--------------|---------------|
| | All Diseases | Zymotic Disease. | Phthisis. | Lung Disease | Heart Disease. | | All Diseases | Zymotic Disease | Phthisis. | Lung Disease | Heart Disease |
| 1881..... | 1323 | 103 | 117 | 193 | 128 | 94,841 | 1395 | 108 | 123 | 203 | 135 |
| 1882..... | 1376 | 164 | 131 | 191 | 120 | 95,746 | 1437 | 171 | 137 | 199 | 125 |
| 1883..... | 1487 | 131 | 158 | 209 | 134 | 99,400 | 1496 | 132 | 159 | 210 | 135 |
| 1884..... | 1487 | 143 | 159 | 222 | 147 | 100,306 | 1482 | 142 | 158 | 221 | 146 |
| 1885..... | 1522 | 152 | 126 | 266 | 126 | 101,212 | 1504 | 150 | 124 | 263 | 124 |
| 1886..... | 1718 | 256 | 159 | 291 | 142 | 102,118 | 1682 | 251 | 155 | 285 | 139 |
| 1887..... | 1535 | 101 | 189 | 245 | 158 | 103,038 | 1490 | 98 | 183 | 238 | 153 |
| 1888..... | 1454 | 131 | 148 | 225 | 165 | 103,958 | 1398 | 126 | 142 | 216 | 159 |
| 1889..... | 1363 | 92 | 138 | 197 | 135 | 104,878 | 1300 | 88 | 131 | 188 | 128 |
| 1890..... | 1480 | 105 | 131 | 248 | 172 | 105,798 | 1399 | 99 | 124 | 234 | 162 |
| Total | 14745 | 1378 | 1456 | 2287 | 1427 | | 1458 | 136.5 | 143.6 | 225.7 | 140.6 |
| 1891..... | 1814 | 163 | 123 | 346 | 163 | 106,716 | 1700 | 153 | 115 | 324 | 153 |
| 1892..... | 1936 | 141 | 135 | 343 | 201 | 116,370 | 1663 | 121 | 116 | 295 | 172 |

(A)—Table of DEATHS during the Year 1892, in the combined Sanitary

| Names of Localities adopted for the purpose of these Statistics; Public Institutions being shown as separate localities. (a) | MORTALITY FROM ALL CAUSES, AT SUBJOINED AGES. | | | | | | | (i) | 1 | 2 | 3 |
|---|--|----------------------|-----------------------|------------------------|-------------------------|-------------------------|-------------------------|--------------------------------|-------------------|--------------------|--------------------|
| | At all ages. (b) | Under 1 year. (c) | 1 and under 5. (d) | 5 and under 15. (e) | 15 and under 25. (f) | 25 and under 65. (g) | 65 and up-wards. (h) | | Small Pox. (i) | Scarlatina. (j) | Diphtheria. (k) |
| Steyning R. S. D. | 299 | 69 | 40 | 13 | 13 | 82 | 82 | Under 5 5 upwards. | | | 3 5 |
| Horsham R. S. D. | 294 | 49 | 25 | 15 | 16 | 81 | 108 | Under 5 5 upwards. | | | |
| Petworth R. S. D. | 163 | 18 | 7 | 6 | 4 | 55 | 73 | Under 5 5 upwards. | | | 4 |
| Thakeham R. S. D. | 145 | 16 | 7 | 6 | 5 | 50 | 61 | Under 5 5 upwards. | | | 2 |
| East Preston R. S. D. | 160 | 20 | 11 | 7 | 6 | 48 | 68 | Under 5 5 upwards. | | | 1 1 |
| Midhurst R. S. D. | 247 | 38 | 24 | 13 | 17 | 78 | 77 | Under 5 5 upwards. | | | 6 6 |
| Westbourne R. S. D. | 116 | 22 | 9 | 10 | 3 | 28 | 44 | Under 5 5 upwards. | | | 5 |
| Worthing U. S. D. | 239 | 30 | 14 | 7 | 24 | 82 | 82 | Under 5 5 upwards. | | 1 | 1 2 |
| Littlehampton U. S. D. | 53 | 8 | 4 | 4 | 2 | 18 | 17 | Under 5 5 upwards. | | | |
| Arundel U. S. D. | 44 | 4 | 3 | 2 | 3 | 8 | 24 | Under 5 5 upwards. | | | |
| Horsham U. S. D. | 158 | 26 | 20 | 6 | 9 | 41 | 56 | Under 5 5 upwards. | | | 2 |
| TOTALS | 1918 | 300 | 164 | 89 | 102 | 571 | 692 | Under 5 5 upwards. | | 1 | 11 27 |

The subjoined numbers have also to be taken into

| | | | | | | | | | | | |
|---|----|---|---|---|---|----|----|--------------------------------|--|---|---|
| Deaths occurring outside the District among persons belonging thereto..... | 42 | 1 | — | — | — | 12 | 29 | Under 5 5 upwards. | | | |
| Deaths occurring within the District among persons not belonging thereto..... | 60 | 4 | 1 | 2 | 5 | 22 | 26 | Under 5 5 upwards. | | 1 | 2 |

District of WEST SUSSEX, classified according to Diseases, Ages, and Localities.

MORTALITY FROM SUBJOINED CAUSES, DISTINGUISHING DEATHS OF CHILDREN
UNDER FIVE YEARS OF AGE.

| 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 |
|----------------------|---------|------------------------|------------|------------|------------|----------|-------------|----------|--------------------|-----------------------------|---------------------|-------|-----------|--|-------------------|-----------|------------------------|---------|
| Membranous Croup. | FEVERS. | | | | | Cholera. | Erysipelas. | Measles. | Whooping Cough. | Diarrhoea and Dysentery. | Rheumatic Fever. | Ague. | Phthisis. | Bronchitis, Pneumonia, Pleurisy. | Heart Disease. | Injuries. | All other Diseases. | TOTALS. |
| | Typhus. | Enteric or Typhoid. | Continued. | Relapsing. | Puerperal. | | | | | | | | | | | | | |
| | | | | | | | | 3 | 21 | 6 | | | | 21 | | 1 | 54 | 109 |
| | | 2 | | | | | | | | | 1 | | 13 | 31 | 31 | 11 | 96 | 190 |
| | | | | | | | | 5 | 4 | 1 | | | | 21 | | 2 | 41 | 74 |
| | | | | | | | 3 | | 1 | | 2 | | 13 | 50 | 26 | 8 | 117 | 220 |
| | | | | | | | | | 3 | | | | | 4 | | 1 | 17 | 25 |
| | | | | | | | | | | | | | 11 | 24 | 18 | 3 | 78 | 138 |
| | | | | | | | | | 3 | 1 | | | | 4 | 1 | 1 | 13 | 23 |
| | | | | | | | | 1 | | | 1 | | 7 | 15 | 13 | 6 | 77 | 122 |
| | | | | | | | | | 1 | 1 | | | | 7 | 1 | | 20 | 31 |
| | | 2 | | | | | | | | | | | 10 | 29 | 16 | 3 | 68 | 129 |
| | | | | | | | | | 7 | 1 | | | | 13 | | 1 | 34 | 62 |
| | | | | | | | 1 | | | | 1 | | 22 | 18 | 27 | 6 | 104 | 185 |
| | | | | | | | | | 4 | 2 | | | | 7 | | | 18 | 31 |
| | | | | | | | | | | | | | 8 | 19 | 6 | 1 | 46 | 85 |
| | | | | | | | | 1 | | 3 | | | | 9 | 1 | 1 | 27 | 44 |
| | | 4 | | | | | 3 | | | | | | 27 | 29 | 27 | 6 | 97 | 195 |
| | | | | | | | | 2 | 1 | 2 | | | | | | | 7 | 12 |
| | | | | | | | | | | | | | 6 | 4 | 5 | 1 | 25 | 41 |
| | | | | | | | | | | | | | | 1 | | | 6 | 7 |
| | | | | | | | | | | | | | 5 | 2 | 11 | | 19 | 37 |
| | | | | | | | | | 4 | 2 | | | | 18 | | | 22 | 46 |
| | | | | | | | | | | 1 | 1 | | 11 | 16 | 16 | 1 | 64 | 112 |
| | | | | | | | | 11 | 48 | 19 | | | | 105 | 3 | 7 | 259 | 464 |
| | | 8 | | | | | 7 | 1 | 1 | 1 | 6 | | 133 | 237 | 196 | 46 | 791 | 1454 |

account in judging of the above records of mortality.

| | | | | | | | | | | | | | | | | | | |
|--|--|---|--|--|--|--|---|--|---|--|--|--|---|---|----|---|----|----|
| | | | | | | | | | | | | | | | | | 1 | 1 |
| | | | | | | | 1 | | | | | | 3 | 6 | 5 | 1 | 25 | 41 |
| | | | | | | | | | 1 | | | | | | | | 3 | 5 |
| | | 2 | | | | | 1 | | | | | | 7 | 8 | 10 | 1 | 24 | 55 |

(B)—Table of POPULATION, BIRTHS, AND OF NEW CASES OF
of Health, during the year 1892, in the combined Sanitary District of

| Names of Localities adopted for the purpose of these Statistics; Public Institutions being shown as separate localities. | POPULATION AT ALL AGES. | | Registered Births. | Aged under 5 or over 5. | NEW CASES OF COMING TO THE KNOW- OF | | | | |
|--|----------------------------|--|--------------------|-------------------------------|---|-------------|-------------|----------------------|---------|
| | Census 1891. | Esti- mated to mid- dle of 1892. | | | 1 | 2 | 3 | 4 | 5 |
| (a) | (b) | (c) | (d) | (e) | Small Pox. | Scarlatina. | Diphtheria. | Membranous Group. | Typhus. |
| Steyning R. S. D..... | 19030 | 19340 | 527 | Under 5 5 upwards. | | 6 34 | 7 24 | 1 | |
| Horsham R. S. D. | 16248 | 16350 | 399 | Under 5 5 upwards. | | 6 27 | 13 | | |
| Petworth R. S. D. | 9431 | 9420 | 214 | Under 5 5 upwards. | | 2 10 | 20 | 1 | |
| Thakeham R. S. D. | 8054 | 8030 | 185 | Under 5 5 upwards. | | 2 15 | | | |
| East Preston R. S. D. | 8692 | 8750 | 204 | Under 5 5 upwards. | | 1 7 | 2 10 | 1 | |
| Midhurst R. S. D..... | 14235 | 14260 | 356 | Under 5 5 upwards. | | 2 23 | 3 55 | | |
| Westbourne R. S. D. | 7084 | 7050 | 203 | Under 5 5 upwards. | | 2 7 | 17 | | |
| Worthing U. S. D. | 16606 | 17220 | 386 | Under 5 5 upwards. | | 4 28 | 1 12 | | |
| Littlehampton U. S. D. | 4452 | 4500 | 81 | Under 5 5 upwards. | | 1 5 | 4 | | |
| Arundel U. S. D. .. | 2644 | 2640 | 69 | Under 5 5 upwards. | | 1 1 | 2 | | |
| Horsham U. S. D. | 8637 | 8810 | 211 | Under 5 5 upwards. | | | 2 | | |
| TOTALS | 115113 | 116370 | 2835 | Under 5 5 upwards. | | 23 144 | 15 174 | 1 2 | |

INFECTIOUS SICKNESS, coming to the knowledge of the Medical Officer
WEST SUSSEX ; classified according to DISEASES, AGES, and LOCALITIES.

[illegible]

